

## Sharp SPC1107EL

# Sharp Atomic Clock User Manual

Model: SPC1107EL

## INTRODUCTION

This manual provides comprehensive instructions for setting up, operating, and maintaining your Sharp Atomic Clock with Bright Color Display. This clock features atomic accuracy, jumbo 3-inch easy-to-read numbers, and displays both indoor and outdoor temperatures with a wireless outdoor sensor. Please read this manual thoroughly before use to ensure optimal performance and longevity of your device.



## SETUP

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### 1. Powering the Main Unit

The Sharp Atomic Clock can be powered via the included AC adapter for an "always on" display or by batteries for an "on-demand" backlight function.

- **AC Power:** Plug the provided 110V/120V AC adapter into a standard household wall outlet and connect it to the clock. This will provide continuous power and an always-on backlight.
- **Battery Power (Optional):** For battery operation, insert three (3) AA batteries (not included) into the battery compartment located on the back of the main unit. When operating on battery power, the backlight will illuminate for 5 seconds when the BACKLIGHT button is pressed.

### 2. Setting Up the Wireless Outdoor Sensor

The wireless outdoor sensor transmits outdoor temperature readings to your main clock unit.

- Insert two (2) AAA batteries (not included) into the wireless outdoor sensor.
- Place the sensor in a shaded, dry location outdoors, away from direct sunlight and sources of heat or moisture. Ensure it is within 100 feet of the main unit for optimal signal reception. Avoid placing it near metal objects, which can interfere with readings.

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Figure 2: The compact wireless outdoor sensor, designed for placement within 100 feet of the main unit.

### 3. Initial Atomic Time Synchronization

The clock is designed to automatically synchronize with the WWVB radio signal from Fort Collins, Colorado, ensuring atomic accuracy.

- After powering on, the clock will begin searching for the WWVB signal. The atomic signal icon will flash on the screen during this 7-minute search.
- If the signal is acquired, the icon will stop flashing. If not, the clock will attempt to connect again, typically overnight when interference is minimal. Full synchronization may take up to 48 hours.
- For best reception, place the clock along a wall or near a window that faces Fort Collins, Colorado. Avoid placing it near electronic devices (computers, power lines, vehicles) that can cause interference.





Figure 3: Overview of the clock's features, including atomic accuracy and temperature displays.

## DAYLIGHT SAVINGS TIME ASSISTANCE



- Remember, minutes and seconds are the same in all time zones within the WWVB coverage area; only hours are different. If your clock is off by one or more hours, it probably has to do with a time zone setting. Make sure you have properly selected your time zone using the instructions that came with your radio controlled clock.
- If you live in an area that does not observe Daylight Saving Time (Arizona, Hawaii, parts of Indiana), make sure that DST is disabled on your radio controlled clock. Not all clocks have this feature, so you might have to select another time zone to make your clock display the correct time when DST is in effect.
- Most radio controlled clocks allow you to select four different time zones (Pacific, Mountain, Central, and Eastern); some offer six time zones including Alaska & Hawaii.

Figure 4: Illustration explaining the automatic synchronization process of atomic clocks with the WWVB radio signal.



Figure 5: Visual guide on how to improve atomic signal reception by avoiding common interference sources.

#### 4. Setting Time Zone and Daylight Saving Time (DST)

After initial synchronization, ensure your time zone is correctly set. The clock supports multiple time zones (Pacific, Mountain, Central, Eastern, and potentially Alaska & Hawaii).

- Press the "TIME ZONE" button (usually labeled "UP TIME ZONE" on the back) to cycle through available time zones until yours is displayed.
- If you reside in an area that does not observe Daylight Saving Time (e.g., Arizona, Hawaii), ensure DST is disabled on your clock. Refer to the full instruction manual for specific steps on disabling DST if this feature is available on your model.



# OUTDOOR TEMPERATURE ASSISTANCE



If your outside temperature is not showing on your clock, that may mean that the clock and the transmitter have lost their connection. To reconnect them you must first take the batteries out of both of the units for 15 minutes. First put the batteries back into the transmitter, and then the clock. Let them sit side by side inside your home. When both the indoor and outdoor temperatures show on your clock with the same reading, or within two degrees of each other, then you may put your transmitter back outside. Remember to keep the transmitter out of the direct sun in a dry place. Also keep it away from metal, which can affect the readings.

Figure 6: Information regarding Daylight Saving Time settings and time zone adjustments.

## OPERATING INSTRUCTIONS

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### Display Features

The clock's bright color display provides clear visibility of essential information:

- **Time:** Jumbo 3-inch tall numbers for easy reading.
- **Indoor Temperature:** Displays the current temperature inside your home.
- **Outdoor Temperature:** Displays the current temperature from the wireless outdoor sensor.
- **Calendar:** Shows the month, date, and day of the week.

### Adjusting Brightness

The display brightness can be adjusted to suit your preference. There are typically multiple levels of brightness (e.g., 100%, 50%, 8%, OFF) when the clock is AC powered. When on battery power, the backlight is on-demand for 5 seconds

when the BACKLIGHT button is pressed.



Figure 7: Visual representation of the four adjustable brightness levels for the clock display.

### 12/24 Hour Format

To switch between 12-hour and 24-hour time formats, press the "12/24" button on the back of the unit.

### Celsius/Fahrenheit Toggle

To switch between Celsius and Fahrenheit temperature units, press the "°C/°F" button on the back of the unit.

### Manual Time and Calendar Setting

In rare cases where the atomic signal cannot be received, you can manually set the time and calendar:

- **Calendar:** Press and hold the "CALENDAR" button for 2 seconds to manually set the calendar. Use the UP/DOWN buttons to change the value of Year, Month, Date, and Language. Press "CALENDAR" again to confirm each setting.
- **Time:** Press and hold the "TIME" button for 2 seconds to manually set the time. Use the UP/DOWN buttons to change the value of Hour, Minute. Press "TIME" again to confirm each setting.

## TROUBLESHOOTING

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### Atomic Signal Reception Issues

If your clock is not synchronizing with the atomic time signal:

- **Repositioning:** Try rotating the clock 90 degrees. If wall-mounted, try a different wall (e.g., north-south wall instead of east-west).
- **Location:** Place the clock along a wall or near a window facing Fort Collins, Colorado. Ensure it is at least 6 feet away from electronic devices like computers, TVs, or other appliances that emit radio frequency interference.
- **Outdoor Test:** If indoor reception is consistently poor, take the clock outdoors at night (remove batteries first, then plug it in) to force it to search for the WWVB signal. If it works outdoors but not indoors, your building may be causing interference.
- **Building Materials:** Metal buildings or steel siding can block the signal.
- **Manual Wave:** Press and hold the "WAVE" button on the back of the clock for 2 seconds to manually initiate a search for the atomic signal.

### Outdoor Temperature Sensor Issues

If the outdoor temperature is not displaying or is inaccurate:



- **Reconnect:** Remove batteries from both the main unit and the outdoor sensor for 15 minutes. Then, reinsert batteries into the sensor first, followed by the main unit. Place both units side-by-side indoors until their temperatures show within two degrees of each other. Once reconnected, place the sensor back outdoors in its designated location.
- **Placement:** Ensure the sensor is in a dry, shaded area, away from direct sunlight, heat sources, and metal objects.
- **Channel:** If you have multiple sensors or interference, ensure the main unit and sensor are on the same channel. Use the "CHANNEL" button on the back of the main unit to switch between channels (1, 2, 3) to receive the outdoor sensor's signal.



Figure 8: Guidance on troubleshooting and reconnecting the outdoor temperature sensor.

## General Reset

If the clock is behaving erratically, a full reset may resolve the issue. Press the "RESET" button on the back of the unit using a small, pointed object (like a paperclip).

## MAINTENANCE

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- **Battery Replacement:** Replace batteries in both the main unit and the outdoor sensor when the display indicates low power or when performance degrades. For optimal performance, Duracell batteries are recommended.
- **Cleaning:** Clean the clock and sensor with a soft, dry cloth. Avoid using abrasive cleaners or solvents.
- **Storage:** If storing the clock for an extended period, remove all batteries to prevent leakage.

## SPECIFICATIONS

Feature	Detail
Brand	Sharp
Model Number	SPC1107EL
Display Type	Digital, Color
Time Display	Jumbo 3" Tall Numbers
Temperature Display	Indoor/Outdoor (with wireless sensor)
Power Source	Corded Electric (AC adapter) / Battery (3x AA for main, 2x AAA for sensor)
Special Feature	Adjustable Brightness, Atomic Accuracy
Product Dimensions	8.75"W x 7.9"H
Mounting Type	Wall Mount / Table Top Viewing
Item Weight	1.61 Pounds

## WARRANTY AND SUPPORT

Sharp products are manufactured to high quality standards. For warranty information, technical support, or service inquiries, please refer to the warranty card included in your product packaging or visit the official Sharp website. Keep your purchase receipt as proof of purchase for any warranty claims.

