

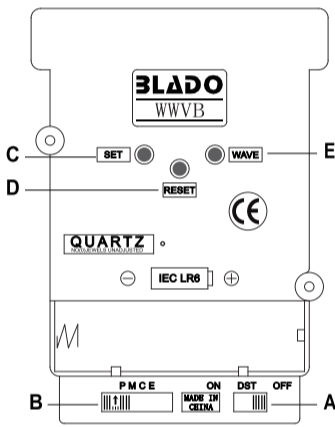


Introduction

Your clock has movement receiving radio signals sent from the National Institute of Standards and Technology (NIST) radio station WWVB, which is located near Fort Collins, Colorado. WWVB broadcasts on a frequency of 60 kHz. Your radio-controlled clock actually has a miniature radio receiver inside, which is permanently tuned to receive the 60 kHz signal. After receiving the signals, your clock tells the time on dial which is synchronized with the most accurate atomic clock in the USA, Since the signal from WWVB is much stronger during the evenings, once the sun goes down. It is the best to set up your clock during evenings.

Precautions

1. Due to the nature of long wave radio signals it is normally not optimum to receive a signal during the day, so it is best to install the battery late in the evening.
2. Keep clear of metal objects which might interfere with signal reception.
3. In some instances, due to geography or materials used in the building construction, the signal may not be received. It is best to select a place for your clock near a window.
4. DO NOT place your clock near power source or other household electrical appliances such as computer, TV, air conditioner, electrical wires, microwave etc. Those appliances might interfere with signal reception.
5. Clock movement has built-in feature to scan WWVB signal 9 times every day at 1am, 2am, 3am, 4am, 5am, 10am, 2pm, 6pm, 10pm. This process makes sure that your clock is synchronized with the WWVB signal. If synchronization is needed, minute hand and second hand will automatically move forward. The time shown will catch up to the actual time after synchronization.



Picture 1

OPERATING INSTRUCTIONS

To Start Setup the Clock (Automatic Setup)

Select **Daylight Saving Time (DST) switch "A"**. Read more details about DST function on the section of " To Set Daylight Saving Time".

Select your time zone "P,M,C or E" switch "B". Read more details about time zone on the section of "To Select Time Zone".

If your clock has a back, remove back cover.

Insert a fresh, good quality alkaline "AA" size battery into the battery compartment making sure the battery polarity is as indicated. (Each time when you remove battery, don't reinsert battery immediately. Please wait about 5~10 seconds and reinsert battery into the movement. The movement will be reset). When battery is installed, the hands will advance quickly and stop at 12 o'clock. It may take up to 4 minutes depending on the time setting from factory. The clock is now searching for a signal. For the initial setting it is recommended to stand the clock in an upright position near a window. Windows facing the west if east of Colorado and east if West of Colorado work best. Do not move your clock around during setup process. Moving your clock affects the reception of signal.

The signal searching process takes approximately 3 to 8 minutes. If the clock has received the signal, the hands will advance quickly and correspond to the current time of the time zone selected.

If the clock does not receive the signal, the clock will start running at 12:00. In this case you can either reinsert the battery or press the **"RESET" button "D"** on back of movement. This will initiate setting process automatically. If it fails to receive signal (i.e. Hands do not advance forward quickly to correct time and start running at 12:00), leave the clock alone for 24 hours. The built-in automatic synchronization feature will pick up the signal and synchronize hands to correspond to the correct time.

Automatic Synchronization

Your clock will receive the WWVB signal after the setup process. The clock movement will search for the WWVB signal 9 times every day at 1am, 2am, 3am, 4am, 5am, 10am, 2pm, 6pm, 10pm and synchronize with the most accurate clock in the world.

If the clock movement can receive WWVB signal and synchronization is needed, minute hand and second hand will automatically move forward. The time shown will catch up to the actual time after synchronization.

If the clock stops at 12 o'clock for more than 12 minutes, it means the clock is unable to set itself automatically. In this case you can either go to Manual Set mode (please refer "Manual Setup" or "Force Receiving" section) or reset the clock again at a different time or different location.

To Set Daylight Saving Time (DST)

DST function is to let your clock automatically adjust the time during daylight saving time according to WWVB signals. This function will be disabled if the clock movement cannot receive WWVB signals.

To activate DST function, slide the **"DST" switch "A"** at the back of the clock movement (see picture 1) to the position "On". The movement will be on DST mode. Your clock will read this information and automatically advance the hands one hour in the spring and eleven hours in the fall.

Please note: After setting up your clock –

If "DST" switch is in the "On" position and your clock doesn't respond DST automatically, it means the clock movement isn't picking up WWVB signal. Please refer to the "Manual Setup" section to adjust the time manually.

Anytime you slide the "DST" switch from "Off" position to "On" position, your clock will automatically advance quickly to respond current time after receiving WWVB signals.

To Deactivate DST

If you live in an area that does not recognize DST signal you must slide the "DST" switch "A" to the position "Off".

To Select Time Zone

Slide the **"PMCE" switch "B"** at the back of the clock movement (see picture 1) to the position corresponding to your time zone.

Anytime you slide the time zone switch "B" to another time zone after setup your clock, hour hand and minute hand will immediately and quickly advance to respond selected time zone automatically. Do not activate this function often since it consumes battery power.

For time zones outside of Pacific Time, Mountain Time, Central Time or Eastern Time you must manually set the time using the Manual Mode procedures. Please see "Manual Setup" section on this booklet.

Manual Setup

The WWVB time signal will easily penetrate almost every residential building and most Commercial buildings if they have adequate windows. It is not possible, however, for WWVB signal to penetrate most indoor shopping malls and rooms in the center of large office buildings that do not have windows. In buildings that WWVB signal cannot penetrate you may set the time using the Manual Set mode. In this case the clock movement operates as a standard quartz movement and keeps the accurate time.

To use the manual time setting feature, insert a battery into the clock movement, press the **"Set" buttons "C"** at the back of the clock movement (see picture 1) for 3 seconds. Continue to hold the button down. The hour and minute hands will start to advance quickly. Once the hands are approaching the desired time, release the button. Then each press the "Set" button "C" to advance the minute hand by one minute with each push. Adjust time until the desired time is obtained. then release the button the manual setup process is completed.

Force Receiving Signal

Force receiving is a special feature that let your clock synchronize with WWVB signal anytime you want. Use this feature after setting up your clock.

To activate this function, press the **"WAVE" button "E"** at the back of the clock movement (see picture 1) for more than 3 seconds. All hands will advance to 12 o'clock position and movement starts scanning WWVB signal. The signal scanning process will take about 3 ~ 8 minutes.

- If clock movement receives signal, hands will advance quickly to the current corresponding local time. Your clock is now synchronized with WWVB signal.
- If clock movement cannot receive signal, hands will quickly advance to previously set time.
- When the clock movement is on scheduled signal scanning process, do not move the clock, change any settings or push any buttons. Any action will interrupt the accuracy of scanning signal.

General Notes

1. To clean the outside surfaces, use a clean, dry, soft cloth to wipe away fingerprints. Do not use any solvents or abrasive cleaner / polish.
2. Replace battery if the timekeeping becomes erratic as this may be an indication of battery exhaustion.
3. If the clock is a wall mounted clock it must be mounted to the wall with a mounting device that will support the weight of the clock.