



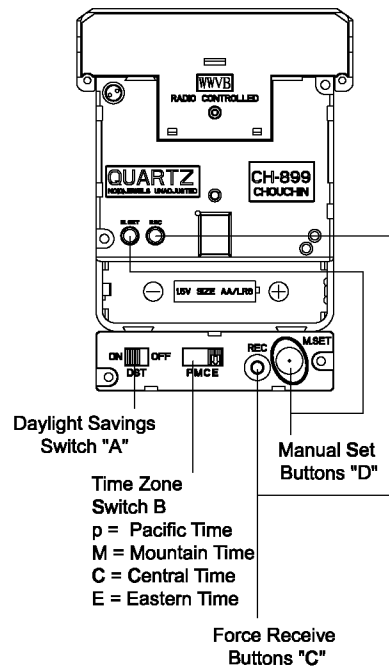
## Introduction

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 NIST in 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.

If you would like to know more about Radio Controlled clock or its operation, please visit NIST website at : <http://tf.nist.gov/timefreq/stations/radioclocks.htm>  
(Website is property of NIST. It might be changed without prior notice.)

## Cautions

1. Due to the nature of long wave radio signals it is normally not possible 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 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 everyday. This process makes sure that your clock is synchronized with WWVB signal. During scanning signal, hands will stop for not more than 10 minutes. The duration of movement suspension for signal searching depends on strength of signal. If the clock movement can receive WWVB signal, it will check the signal 3 times everyday at 1:16:00 am, 2:16:00 am, 4:16:00 am. If the clock movement cannot receive WWVB signal, it will check the signal 4 times everyday at 2:16:48 am, 4:16:48 am, 2:16:48 pm, and 4:16:48 pm. If you find your clock stopped at the stated time for awhile, it is normal because the movement is in synchronization process. The time shown will catch up to the actual time after synchronization.



Picture 1

## OPERATING INSTRUCTIONS

### To Start Setup the Clock (Automatic Setup)

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. If battery is already in clock, please remove insulator and reinsert battery. (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 takes from approximately 1 to 6 minutes. It depends 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 Colorado provide the best signal. Do not move your clock around during setup process. Moving your clock affects the reception of signal. If the clock has received the signal, the hands will advance quickly to correspond to the current time at your time zone. It should take not more than 10 minutes for a complete automatic time setup.

### Automatic Synchronization

Either your clock can or cannot receive WWVB signal after setup process, the clock movement will search WWVB signal everyday and try to synchronize with the most accurate clock in the world. If the clock movement can receive WWVB signal, it will check the signal 3 times everyday at 1:16:00 am,

2:16:00 am, 4:16:00 am. If the clock movement cannot receive WWVB signal, it will check the signal 4 times everyday at 2:16:48 am, 4:16:48 am, 2:16:48 pm, and 4:16:48 pm. When the clock reaches pre-scheduled synchronization time as above list, clock movement will stop and start scanning WWVB signal. If you find that your clock stops at the specific time, it is normal.

- If clock movement receives signal, hands will advance quickly to the current corresponding local time. It will take around 4~10 minutes. Your clock is now synchronized with WWVB signal.
- If clock movement cannot receive signal, hands will quickly advance to previously set time within 10 seconds.
- When the clock movement is on scheduled signal scanning process, do not move the clock or change any setting such as changing time zone or pressing on either "Force Receive" button. Any action will interrupt the accuracy of scanning signal.

If the clock stops at 12 O'clock for more than 10 minutes it means the clock is unable to set itself automatically. In this case you could either go to Manual Set mode (please refer "Manual Setup" or "Force Receiving" section) or reset the clock again in different time or different location.

### 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.

### To Set Daylight Savings 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 setup your clock – Anytime "DST" switch is on "On" position and your clock doesn't respond DST automatically, it means the clock movement doesn't pick up WWVB signal. Please refer to

"Manual Setup" section to adjust 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".

### Manual Setup

The WWVB time signal will easily penetrate almost every residential building and most steel 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 have manual time setting after inserting battery into clock movement, press either one of the "**M.Set**" buttons "**D**" for 3 seconds. Do not release the button. The hour and minute hands will start to advance quickly. Once the hands are approaching the desired time, release the button. Then each press on an "**M.Set**" buttons "**D**" will advance minute hand by one minute. Adjust time till to your desired time. If you don't press an "**M.Set**" buttons "**D**" within 7 seconds, the manual setup mode is over and the clock time is set.

### Force Receiving

Force receiving is a special feature that let you synchronize your clock with WWVB signal anytime you want. Use this feature after setup your clock. To activate this function, press either of the "**REC**" buttons "**C**" at the back of the clock movement (see picture 1) for more than 3 seconds. All hands will stop and movement starts scanning WWVB signal. The signal scanning process will take not more than 10 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 finger prints. Do not use any solvents or abrasive cleaner / polish.
2. Use the rear hand set knob to set time and do not touch or move hands manually!
3. Replace battery if the timekeeping becomes erratic as this may be an indication of battery exhaustion.
4. 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.

*Book No. 59C*

### Limited Warranty

Your new Bulova clock is warranted to the original consumer only for one full year, to be free from defects in materials or workmanship under normal use.

This warranty excludes the battery and wear to the case.

Our obligation under this warranty is limited solely to repairing the product without charge, if returned, postage prepaid to the retailer from whom purchased or, along with \$6.00 postage for handling, postage and insurance, to the Bulova facility listed below.

All implied warranties, including that of merchantability, are limited to one year.

Bulova is not liable for incidental or consequential damages for failure or malfunction of the product and any recovery may not be greater than the purchase price paid for this product.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

No person is authorized to change the terms of this warranty.

Clocks which are returned for repair after the warranty period or which show damage for which we are not responsible, will be repaired at owner's expense.

It is important that the clock be carefully packed prior to shipment to prevent damage in transit and that you send a separate letter describing in detail the specific condition requiring adjustment or repair.

### Return For Service Information

1. Place the complete clock into a poly bag to keep packing dust or debris from entering the movement enclosure. This will prevent additional cleaning charges.
2. Enclose a note fully describing the symptoms of the trouble to reduce the repair time cycle. Enclose the required remittance in check form, not cash.
3. Wrap and pad very well and use more rather than less padding to protect your unit as damage caused by transit is not covered by the limited warranty and can be a very costly repair item. Use plenty of crumpled newspaper, for instance, and a sturdy corrugated box. Seal carefully and well.
4. Send the package prepaid to the address below. A repair within the scope of the limited warranty will be done as stated. Units beyond the warranty scope or time limit will be estimated prior to any work being attempted beyond that needed for estimating. The estimate will be sent for your written approval and payment and upon their return, work will begin.

  
**BULOVA®**

**Bulova Corporation, Clock Service**  
1 Bulova Avenue, Woodside, NY 11377, USA

In Canada:  
**Bulova Watch Company, Ltd., Service Dept.**  
39 Casebridge Court  
Toronto, Ontario, Canada M1B 5N4  
*In Canada refer to warranty instructions*