

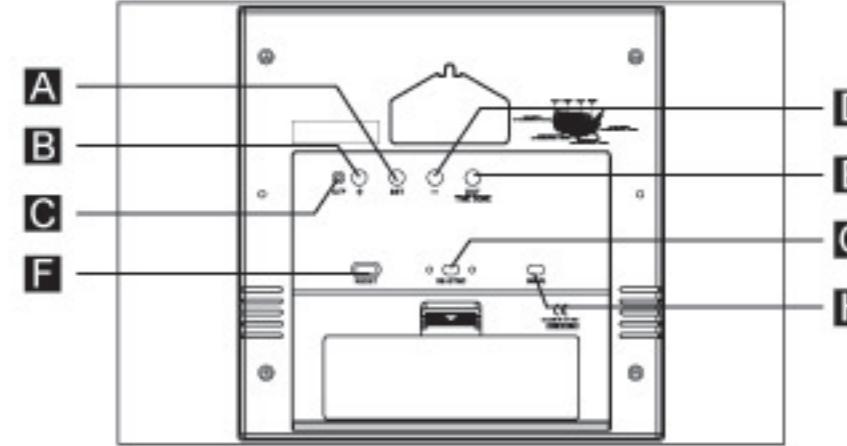
# INSTRUCTION MANUAL

## Locations of Control

### Main Unit (Receiver)



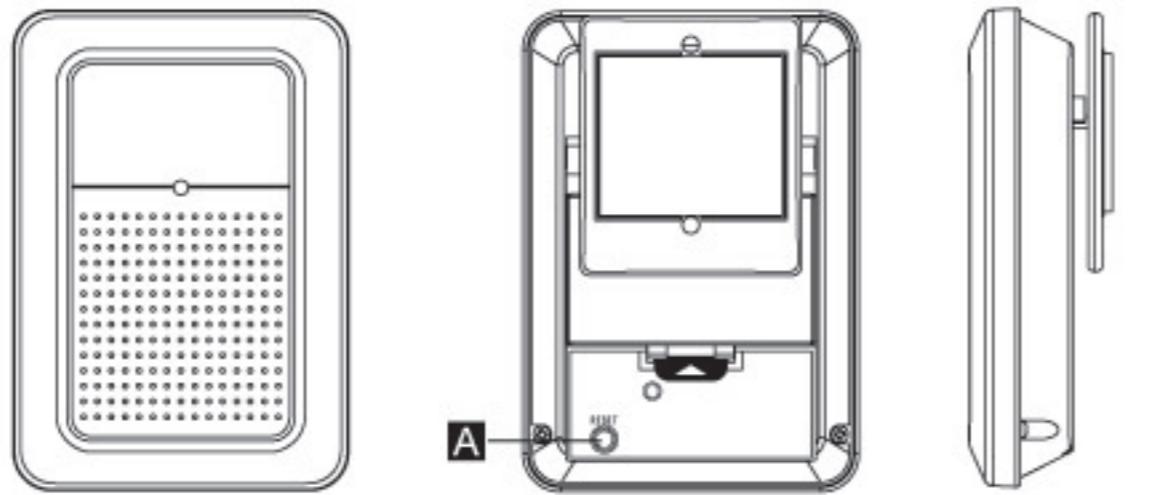
- A** SET BUTTON
- B** + (Forward Set) BUTTON
- C** °C/ °F BUTTON
- D** - (Backward Set) BUTTON
- E** DST/TIME ZONE BUTTON
- F** RESET BUTTON
- G** RE-SYNC BUTTON
- H** WAVE BUTTON



Model 838A

### Remote Unit (Transmitter)

- A** RESET Button



Model 6725

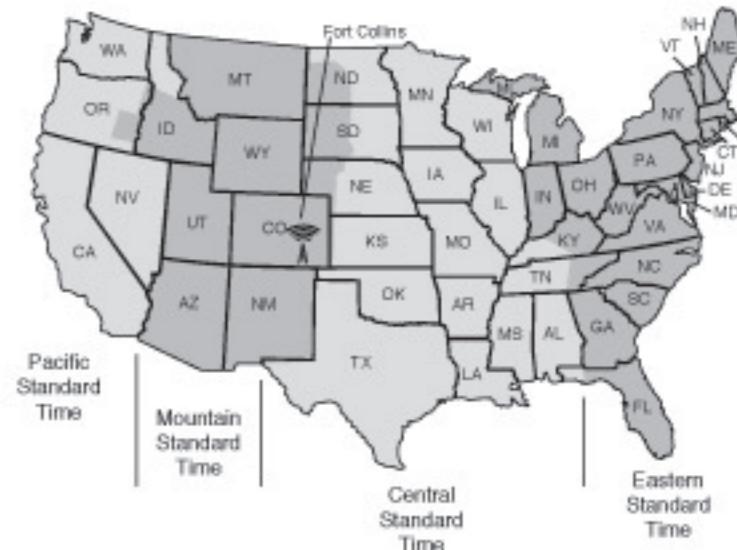
- The configuration of your clock may differ somewhat from that shown in the illustration.
- "AA" or "AAA" size battery. This clock may use more than one piece of battery. Please refer to the engraved battery marks inside the battery compartment for the correct battery type.

## The RADIO-CONTROLLED Clock

With the Radio-Controlled Clock, you have the most accurate timepiece within the continent. It can receive the time signal transmitted by the National Institute of Standards and Technology (NIST), which is regulated by 3 atomic clocks and deviates less than 1 second within 3,000 years.

The NIST broadcasts the time signal (WWVB, 60kHz) continuously from Fort Collins, Colorado. This signal can be received anywhere in the continental USA that long wave (AM) radio reception is possible with a portable radio. It is expected that the signal can reach a distance of 2,000 miles from the transmitter. Therefore, your clock will receive the signal within the broadcast range anywhere an AM signal can be received; generally the signal cannot be picked up in massive metal and concrete structures unless near a window. In addition, some environmental effects (see below) may affect the transmitting distance.

For more information, please study the WWVB WEB page of NIST at:  
<http://www.boulder.nist.gov/timefreq/>



## Environmental Reception Effects:

The Radio-Controlled Clock obtains the accurate time with wireless technology. Same as all wireless devices, the receiving ability may be affected by, but not limited to, the following conditions:

- Long transmitting distance.
- Nearby mountains and valleys.
- Among tall buildings.
- Near railway, high voltage cable, etc.
- Near freeway, airport, etc.
- Near construction site.
- Inside concrete buildings.
- Near electrical appliances.
- Bad weather.
- Inside moving vehicles.
- Nearby metallic structures.

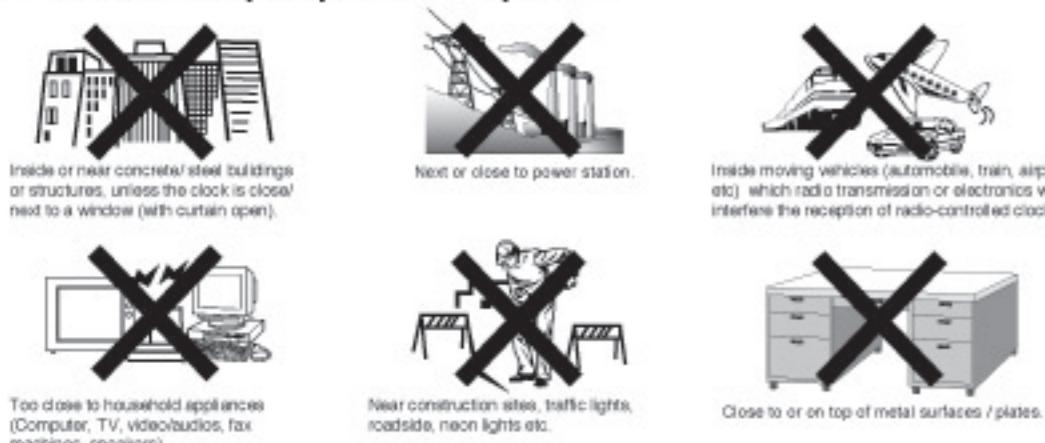
## Features

- Receive 60kHz WWVB signal transmitted by NIST in Fort Collins, Colorado.
- Calendar with day-of-the-week display from January 1, 2005 to December 31, 2049.
- Automatic time and date adjustment after signal reception
- Hour, minute and second display.
- 12 or 24-hour format.
- Crystal oscillator frequency: 32.768kHz.
- Time accuracy (free run); 60 seconds per month.
- Time accuracy (Atomic clock): better than 1 second in 2 million years.
- Centigrade or Fahrenheit readout
- Clock operating temperature from 0°C to 50°C ( 32°F to 122°F )
- Indoor Temperature measuring range from -20°C to 70°C (-4°F to 158°F )\*
- Outdoor Temperature measuring range from -50°C to 70°C (-58°F to 158°F )\*

\*If using the wireless transmitter with temperature below 32°F or above 122°F, user are recommended to use Lithium battery to enhance batteries life.

## Location Precautions

This clock receives a radio wave much like a TV or radio. Be sure to locate it near a window or some other locations where reception is good. Avoid the following locations, which can interfere with proper reception.



## Batteries Installation

### Batteries installation of the main unit

- Insert batteries in polarity (+) and (-) as indicated
- Close the battery cover
- The low battery icon will show in the display when your batteries need replacing

### Batteries installation of remote unit

- Insert batteries in proper polarity (+) and (-) as indicated
- Close the battery door

**Warning :** Do not mix old and new batteries

Do not mix alkaline, standard (carbon-zinc), or rechargeable (nickel cadmium) batteries.

**Do not touch any other buttons or settings on your main unit. It will automatically receive the remote temperature.**

## Getting Started

### Setting the Time Zone and DST

1. Press the "DST/Time Zone" button to select the appropriate time zone. (please see \*)
2. The unit is default with DST activated. If it is used in regions do not observe DST, please follow the following procedures to deactivate DST (please see \*):
  - i. Hold down the "DST/Time Zone" button for about 4 seconds, "DST" and "On" blinking on the LCD display.
  - ii. Press + or - to toggle between DST ON and DST OFF.
  - iii. Press "DST/Time Zone" button again for normal operation.

\* The Clock is set to show the Eastern Standard Time (EST) with Daylight Saving Time as a factory setting. Please adjust these switches according to your location.

## Thermometer

- Upon power up of the remote unit (or pressing the reset button), the temperature RF signal is immediately sent to the main unit. The main unit attempts to receive the RF temperature signal for 5 minutes. The main unit refreshes the RF temperature every 3 minutes.
- If the RF temperature signal is not received within 5 minutes after power up of the main unit (or pressing the reset button), blank "---" will appear in the outdoor temperature window of the main unit. In this case, press the RE-SYNC button of the main unit. The main unit will attempt outdoor temperature reception for another 6 minutes.
- After the remote temperature shows in the lower LCD panel, place the remote unit outside in a shaded, dry area to protect it as if under an umbrella.

## Signal Receive Operation

The main unit automatically receives the time signal 1 time everyday at 1:00am and will make any required adjustment to the time setting.

The WAVE OK indicator and the antenna tower icon appears on the display if the time signal has been successfully received either automatically or after the manual pressing of the WAVE button.

**Important :** Do not press any button or switch while signal reception operation is in progress.

### Triggering a Receive operation Manually

You can trigger a signal reception operation at any time by pressing the WAVE button. This causes the main unit to perform an immediate signal reception operation.

### Unsuccessful Signal Reception

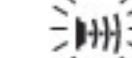
If you are unsuccessful in your attempt to receive a signal after you have installed batteries or after you have activated the reset process, the base unit will continue to search for a signal. The search for a signal every hour until the signal is received.

## Check IN / REMOTE Temperature

The indoor temperature is displayed on the INDOOR temperature field and the OUTDOOR temperature will be displayed on the OUTDOOR temperature field.

## Receiver stage indicator

The RF Temperature signal indicator in the main unit's outdoor temperature window will show the following:

	NO SIGNAL DETECTION
	SIGNAL DETECTION
	SUCCESSFUL RECEPTION

## Losing Synchronization of the wireless thermometer

If the main unit displayed a proper outdoor temperature in the past but now displays blank "--", the remote unit and main unit may have lost synchronization. If this occurs, press the RE-SYNC button of the main unit. The main unit will attempt outdoor temperature reception for another 6 minutes and reinitiate synchronization with the remote unit. If the remote temperature cannot be received, check.

1. The distance of the main unit or remote unit should be at least 3-4 feet away from any interfering sources such as computer monitors or TV sets.
2. Avoid placing the main unit onto or in the immediate proximity of metal window frames.
3. Using other electrical products such as headphones or speakers operating on the same signal frequency (433MHz) may prevent correct signal transmission and reception.
4. Neighbors using electrical devices operation on the 433MHz signal frequency can also cause interference.

Note: When the 433MHz signals is received correctly, do not re-open the battery cover of either the remote unit or the main unit, as the batteries may spring free from the contacts and force a false reset. Should this happen accidentally then reset both unit (see Getting Started above) otherwise transmission problems may occur.

The maximum transmission range is 100 feet from the remote unit to the main unit (in open space). However, this depends on the surrounding environment and interference levels. The temperature signal travels in a straight line from the remote unit to the clock. The signal will not curve around blocking object. If no reception is possible despite the observation of these factors, all units have to be reset (see Getting Started).

## Interference

Signals from other household devices, such as entry controls, door bells and home security systems, may temporarily interfere with the units and cause reception failure. This is normal and does not affect the general performance of the product. The transmission and reception of temperature reading will resume once the interference has stopped.

## Manually Set the Clock

### To Set Calendar and Time

1. Press and hold SET button to enter setting mode, upper LCD show year "2005" and blinks. Press + or - button to set year, hold down + or - will accelerate setting in faster speed.
2. Press SET button again, 1M 1D blinks, press + or - button to set month and date, hold down + or - will accelerate setting in faster speed.
3. Press SET button again, time digits blinks, press + or - button to set time in minutes, hold down + or - will accelerate setting in faster speed.
4. Press SET button again, upper LCD shows 12H and blinks, press + or - button to select 12H or 24H.
5. Press SET button again to confirm time and calendar settings.

### To Select °C or °F Temperature Reading

- Press °C/°F button to choose your desire temperature reading.

### Trouble-Shooting / FAQ (Frequent Ask Questions)

- Press the "Reset" button when the clock is displaying irrelevant temperature reading. This may happen when external noise is severe enough to interfere with the RF temperature signal.
- Press the "Reset" button on the wireless transmitter if the readout is irrelevant or does not respond.

### There is no outdoor temperature shown on the unit

A: Press the re-sync button and the unit should show an outdoor temperature within minutes. If no temperature is shown the remote unit is either too far away or there is some interference between the remote and the main unit. Bring the remote unit to the main unit and re-sync. There is also a reset button on the remote unit. Then move the remote unit to a new location closer and in direct line with the main unit.

### The outdoor temperature is reading 40°C/105°F when the temperature is in the 15°C/60°F

A: The remote unit is in direct sunlight. Move it to a shaded protected area.

### Care of your clock

- Avoid exposing your clock to extreme temperatures, water or severe shock.
- Avoid contact with any corrosive materials such as perfume, alcohol or cleaning agents.
- Do not subject the clock to excessive force, shock, dust, temperature or humidity. Any of these conditions may shorten the life of the clock.
- Do not tamper with any of the internal components of this clock. This will invalidate the warranty and may cause damage.
- The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

## Correct usage of the batteries

- Use 2 new "AA" batteries for the remote unit and main body.
- Do not mix standard and rechargeable batteries
- Do not mix new and old batteries
- When the low battery mark "  " appears on the display, replace all batteries with new ones.

## Specification

### Temperature measuring range

Receiver : -20°C to +70°C with 0.1°C resolution(-4°F to 158°F with 0.2°F resolution)

Transmitter : -50°C to +70°C with 0.1°C resolution(-58°F to 158°F with 0.2°F resolution)

### Temperature checking interval

Receiver : every 32 seconds

Transmitter : every 16 seconds

Transmission distance: maximum 100 feet in open field, depending upon surrounding structures, mounting location and possible interfering sources.

### Power source ( Alkaline batteries recommended )

Receiver : 2 "AA" batteries, 1.5V batteries

Transmitter : 2 "AA" batteries, 1.5V batteries

Battery life : about 12 months

**Warning :** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Note :** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

There is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Under the environment with radio frequency interference, the sample may malfunction and require user to reset the sample.