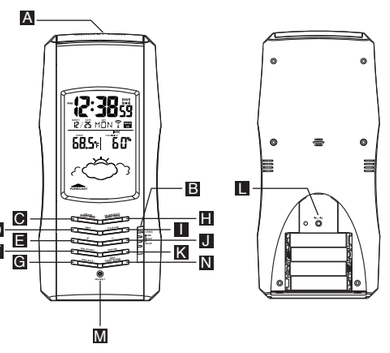
INSTRUCTION MANUAL

Locations of Control
Main Unit (Receiver)

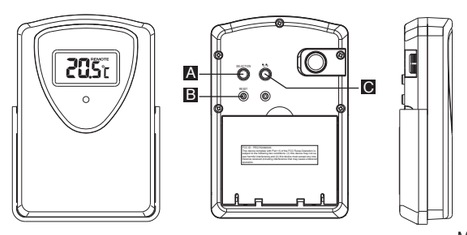


A SNOOZE/LIGHT BUTTON
B SNOOZE/ALARM ON/OFF SWITCH
C TEMP MAX/MIN BUTTON
D SET BUTTON
E + BUTTON
F RE-SYNC BUTTON
G SELECT BUTTON
H HUMIDITY MAX/MIN BUTTON
I CLEAR BUTTON
J - BUTTON
K WAVE BUTTON
L ℃/℉ BUTTON
M RESET BUTTON
N DST/TIME ZONE

Model 8400

Remote Unit (Transmitter)

A SELECTION
B RESET Button
C ℃/℉



Model 7530

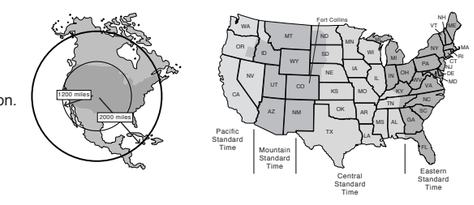
The configuration of your clock may differ somewhat from that shown in the illustration.
"AAA" or "AAA" size battery. This clock may use more than one piece of battery. Please refer to the Dengraved battery marks inside the battery compartment for the correct battery type.

The Radio-Controlled Clock with Thermometer

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 cover a distance of over 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 next page) may affect the transmitting distance.
For more information, please study the WWVB WEB page of NIST at:
http://www.boulder.nist.gov/timefreq/

Feature

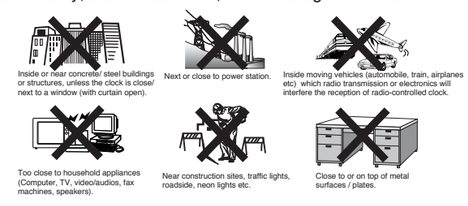
- Receive 60kHz WWVB signal transmitted by NIST in Fort Collins,Colorado.
- Automatic time adjustment after signal reception.
- Calendar with day of the week display from January 1, 2003 to December 31, 2039
- Hour, minute and second display
- 12 or 24-hour format
- Indoor temperature and remote temperature
- Indoor humidity and remote humidity
- Centigrade or Fahrenheit readout
- Clock operating temperature from 0℃ to 50℃ (32℉ to 122℉)
- Indoor, Outdoor Temperature measuring range from -50℃ to 70℃ (-58℉ to 158℉)*
- Temperature resolution 0.1℃
- Humidity resolution 1%
- Time accuracy (Atomic clock): better then 1 second in 3000 years.
- Time accuracy (free run): average with in ±60 seconds per month



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

Attention
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.



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.

Before You Begin

To ensure proper functioning of the Weather Forecast Station, please follow this set up procedure.
- Insert batteries for main unit (Refer to instructions for battery installation).
- Place the main unit as close as possible next to the remote unit and insert batteries for the remote unit.
- Position the remote unit and main unit within effective transmission range, which in usual circumstances is 20 to 30 meters.

Note that the effective range is affected by the building materials and where the main and remote unit are positioned. Try various setup for the best results.

Batteries Installation

Batteries installation of the main unit
- Insert 4 "AAA" 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 2 "AA" size 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 weather forcast station. It will automatically receive the outdoor temperature humidity.

Getting Started

- Upon power up of the remote unit (or pressing the reset button), the temperature/humidity RF signal is immediately sent to the main unit. The main clock attempts to receive the RF temperature/humidity signal for 5 minutes. When the RF temperature/humidity signal received after power up of main unit, display will change to show the OUTDOOR readout and the main unit refreshes the RF temperature/humidity every 3 minutes.
- After the outdoor temperature/humidity shows in the lower LCD panel, place the remote unit outside in a shaded, dry area to protect it as if under an umbrella.
- If the RF temperature/humidity signal is not received within 5 minutes after power up of the main unit (or pressing the reset button), only INDOOR readout will be available and LCD keep showing INDOOR readout. In this case, press the RE-SYNC button of the main unit. The main unit will attempt outdoor temperature/humidity reception for another 6 minutes.

Check INDOOR/OUTDOOR Temperature and Humidity

The indoor temperature and humidity displayed simultaneously on the LCD panel as well as INDOOR icon. Press SELECT button to toggle between INDOOR & OUTDOOR readout automatically.

Press & hold SELECT button for seconds will activate scroll mode which toggle between INDOOR & OUTDOOR readout automatically, a scroll icon will shown for indication.

Press & hold SELECT for another few seconds will dis-activate scroll mode.

Maximum and Minimum INDOOR/OUTDOOR Temperature

The maximum and minimum recorded temperature readings will automatically be stored in the memory.

Press the Max/Min button once to display the INDOOR maximum and minimum record. Press the button again to show the OUTDOOR maximum and minimum record. The respective indicators, INDOOR and OUTDOOR will be displayed.

To clear the memory, press CLEAR when the maximum and minimum temperature records are shown, it will clear the record of the shown temperature field.

Maximum and Minimum IN/REMOTE Humidity

The maximum and minimum recorded humidity readings will automatically be stored in the memory.

Press the Max/Min button once to display the INDOOR maximum and minimum record. Press the button again to show the OUTDOOR maximum and minimum record. The respective indicators, IN and REMOTE will be displayed.

To clear the memory, press CLEAR when the maximum and minimum humidity records are shown, it will clear the record of the shown humidity field.

Using The Clock
As long as batteries are supplying power to the main unit, it receives the time signal and adjusts time automatically. No manual adjustment is required. Accurate adjustment of the clock based on the time signal is supported in Germany and surrounding countries that are within the same time zone and follow the same summer time conventions as Germany.

Signal Receive Operation
The main unit automatically receive the time signal 8 times every day at 02:00, 05:00, 08:00, 11:00, 14:00, 17:00, 20:00, 23:00 and make any required adjustment to the time setting.

The OK indicator and the antennal tower icon appears on the dipslay if the time signal is successfully received at 02:00 or after manual press WAVE button.

***Important:**
Do not perform any button or switch operation while a signal receive operation is in progress.

Triggering a Receive Operation Manually
You can trigger a signal receive operation at any time by pressing the WAVE button, which cause the main unit to perform an immediate signal receive operation. The main unit also perform a signal receive operation automatically whenever you replace its batteries.

Unsuccessful Signal Reception
If the automatic update other than 02:00 are unsuccessful, the wave on top of the antenna tower icon will be disappeared. If the automatic update at 02:00 or manually triggered reception are unsuccessful, both of the wave icon and OK icon will be disappeared.

If unsuccessful signal reception after battery installation or after reset, the main unit keep trying for 10 minutes every hour until signal reception successful.

To Set The Time and Calendar Manually
1. Press SET button to active set mode.
2. Press + button or - button sequentially to set YEAR.
3. Holding down either button changes the year at high speed.
4. Press SET button to confirm YEAR set and goes to DATE set.
5. Press + button or - button sequentially to set DATE.
6. Holding down either button changes the date at high speed.

To Set Time
1. Press SET button again goes to TIME set.
2. Press + button or - button sequentially to set MINUTE.
3. Holding down either button changes the time at high speed. When you press the + button and - button together, the seconds count reset to 00.

To Set 12/24 HR International Time
1. Press SET button again goes to TIME FORMAT set.
2. Press + button or - button to slect 12 or 24 hour display format.
3. Press SET button to confirm TIME FORMAT and finish the setting.

To Set The Alarm Time
1. Press + button or - button sequentially to set the ALARM TIME.
2. Holding down either button changes the alarm time at high speed.

To Activate Alarm Function
1. Slide the SNZ/ALARM ON/OFF switch to ON position, the sign will appear on the time display. The alarm function is activated.
2. When the alarm sounds, press the Snooze/Light button. The alarm will sound the same time of the next day.
3. To deactivate the alarm function, slide the SNZ/ALARM ON/OFF switch to OFF position.

To Activate the snooze alarm
1. Slide the SNZ/ALARM ON/OFF switch to SNZ position. The sign and Zz will appear on the time display.
2. When the alarm sounds, press the Snooze/Light button. The alarm will sound again in approximately 5 minutes.
3. To deactivate the snooze alarm, slide the SNZ/ALARM ON/OFF switch to the OFF position.

Centigrade (℃) or Fahrenheit (℉) set
Press the ℃/℉ button to choose the Centigrade or Fahrenheit readout. Note that the outdoor temperature display on the main unit is dominated by the selection on the main unit. Whatever the display unit of the remote unit is, it will be automatically converted to the chosen one of the main unit.

Check weather forecast
The Weather Forecast is displayed in the weather forecast reading. There are five readings for the forecast: sunny, sunny & cloudy, cloudy, rainy and stormy.

- When the weather tendency is indicated up, it means the weather is going better. If the weather tendency is indicated down, the weather is going bad. While the weather tendency is indicated still, the weather remains unchanged under atmosphere pressure.

Receiver stage indicator

The RF Temperature signal indicator in the clock'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 & humidity 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 outdoor temperature/humidity 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.

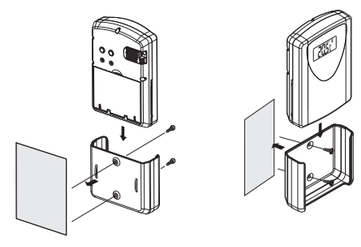
The maximum transmission range is 100 feet from the remote unit to the main unit (in open space). However, this depends on the surrounding environment and interference levels. The temperature signal travels in a straight line from the remote unit to the main unit. The signal will not curve around blocking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

Remote Unit

Check Remote Unit Temperature & Humidity
- Temperature readout is set as default after power up. Press SELECT button to toggle between temperature and humidity readout.
- Press & hold for seconds will activate scroll mode which toggle between temperature & humidity readout automatically. a scroll icon will show for indication.
- Press & hold SELECT button another few seconds will dis-activate the scroll mode.
- The remote unit comes with a wall mount holder which can hold the unit on wall, or just place it on a flat surface with the pull down stand.



Reset the Weather Forecast Station
- Press the RESET button when the Weather Forecast Station does not operate normally.

Notes: Once resetting the Weather Forecast Station, the reliable weather data can be obtained after about 24 hours.

Trouble-Shooting / FAQ (Frequent Ask Questions)
- Press the "Reset" button when the main unit 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 remote unit 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 main 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 weather outside is raining and the unit shows sunny?
A: The main unit measures barometric pressure changes and is showing that the weather will improve in the next six hours. It is set to show changes either up or down in trends and not what is going on at the exact time you view the icon.

The weather icon is incorrect for an extended period.
A: The unit may have been set during a period of high barometric pressure or low barometric pressure and is out of sync. Wait until a partly cloudy day and reset the unit and it will acclimate to the correct level of pressure.

The outdoor temperature is reading 40℃/105℉ when the temperature is in the 15℃/60℉.
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.

Correct usage of the batteries
- Use 2 new "AA" batteries and 4 "AAA" batteries
- Do not mix standard and rechargeable batteries
- Do not mix new and old batteries
- When the low battery mark " " appears on the display, replace the all batteries with new ones.

Specification

Temperature measuring range
Main Unit: -50℃ to +70℃ with 0.1℃ resolution
-58℉ to 158℉ with 0.2℉ resolution
Remote Unit: -50℃ to +70℃ with 0.1℃ resolution
-58℉ to 158℉ with 0.2℉ resolution

Humidity measuring range
Main Unit: 10% ~ 90%
Remote Unit: 10% ~ 90%

Temperature and humidity checking interval
Main Unit: every 16 seconds
Remote Unit: 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)
Main Unit: 4 "AAA" batteries, 1.5V batteries
Remote Unit: 2 "AA" batteries, 1.5V batteries
Battery life: about 12 months
Dimension (L x W x H)
Main Unit: 195 x 90 x 65 mm
Remote Unit: 104 x 70 x 24 mm

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.

However, 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.