

TRACEABLE® GIANT-DIGITS™ ATOMIC CLOCK WITH INDOOR & OUTDOOR TEMPERATURE INSTRUCTIONS

SPECIFICATIONS

WWVB Signal Reception—

Frequency: 60 kHz

Rate: Every 3 hours

Temperature Range—

Ambient: 32.0 to 122.0° F / 0.0 to 50.0° C

Remote: -4.0 to 140.0° F / -20.0 to 60.0° C

Resolution: 0.1°

Temperature Display Update Rate—

Ambient Display: 16 seconds

Remote Module Display: 16 seconds

Remote Display on Main Unit: 3 minutes

Remote Module Transmission—

RF Frequency: 433 MHz

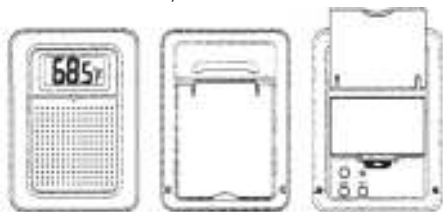
Rate: Every 3 minutes

Distance: Up to 30 meters (100 feet)

INITIAL SET-UP

Remote Module—

(Battery Installation, °F/°C Selection)



1. Lift the stand, located on the back of the remote module, to expose the battery cover and the RESET and °C/°F buttons.
2. Remove the battery cover.
3. Insert the batteries according to the polarities shown by the battery compartment illustration.
4. Replace the battery cover.
5. Select the temperature display unit for the remote module by pressing the °C/°F button.

Note: The temperature display unit of measure (°C/°F) of the remote module and the main unit are independent of each other. The remote module may be set to display °C and the main unit may be set to display °F and vice-versa. Changing the unit of display on one does not affect the display of the other.

Main Unit—

(Battery Installation, °F/°C Selection)



1. Prior to installing the batteries into the main unit, insure the TIME SET switch, located on the back of the unit, is set to the LOCK position.
2. Remove the battery cover.
3. Insert the batteries according to the polarities shown by the battery compartment illustration.
4. Replace the battery cover.
5. Select the temperature display unit by pressing the °C/°F button.

Note: The temperature display unit of measure (°C/°F) of the remote module and the main unit are independent of each other. The remote module may be set to display °C

and the main unit may be set to display °F and vice-versa. Changing the unit of display on one does not affect the display of the other.

SET-UP TIPS

1. Insert batteries into the remote module before the main unit.
2. Place the main unit as close as possible to the remote unit. This will ensure easier reception of signal.
3. Position the remote module within the effective transmission range (up to 30 meters/100 feet).

Note: The effective range is significantly affected by building materials and by where the main unit and remote modules are positioned. Try various setups to insure proper signal reception.

Important: Though the remote module is weather resistant, it should be placed away from direct sunlight, rain, or snow.

SIGNAL RECEPTION

Atomic Clock—

The unit contains a pre-tuned internal radio receiver that receives a 60 kHz frequency signal generated by the U.S. Atomic Clock. The U.S. Atomic Clock is located in Boulder, Colorado and is operated by NIST (National Institute of Standards and Technology).

Once the batteries have been installed, the unit automatically activates its receiver. Upon successful reception of the signal from the Atomic Clock, the correct time-of-day and date will appear on the display.

The unit may not receive a signal immediately. It may take as long as 72 hours to receive a complete signal from the Atomic Clock. The clock will attempt a signal reception for 10 minutes every 3 hours until it successfully receives the signal from the atomic clock. While the unit is attempting to receive a complete signal for the first time, the clock may be set manually (see the "Manual Clock/Calendar Setting" section). Best reception often occurs between midnight and 4 am.

The successful reception of the Atomic Clock signal is dependent upon the positioning and location of the unit. Insufficient signal strength or external electrical interference may prevent the unit from receiving a complete signal. The main causes for poor reception are heavily reinforced concrete and steel structures and/or placement of the unit close to video or PC monitors. There are certain areas of the Eastern United States where urban interference or signals from the United Kingdom's Atomic Clock may distort or interfere with the signal from the U.S. Atomic Clock.

Atomic Clock Signal Indicators



Indicates completed signal reception and synchronization with the Atomic Clock.



Flashing, indicates that the unit is attempting to receive the signal from the Atomic Clock.

Not flashing, indicates signal has not been successfully received.

If this symbol appears for more than 72 hours, the unit should be repositioned for better reception.

Remote Module—

Once the batteries have been installed in the remote module, the unit automatically activates its transmitter. Once the batteries have been installed in the main unit, the main unit automatically activates its receiver. The clock will attempt to receive the RF signal from the remote temperature module for 5 minutes. Upon successful reception of the remote module's signal, the display will show the remote temperature.



If no signal is received from the remote module, the main unit display will show "--" for the remote temperature. Press the RE-SYNC button, located on the back of the main unit, to initiate signal reception again.

The successful reception of the remote module's RF signal is dependent upon the positioning and location of the remote module. Insufficient signal strength or external electrical interference may prevent the unit from receiving the signal. The main causes

for poor reception are heavily reinforced concrete and steel structures and/or placement of either unit close to video or PC monitors.

Important: The temperature display on the remote module is updated every 15 seconds, the remote temperature display on the main unit is updated every 3 minutes. The difference in update rates may account for discrepancies between the reading shown on the main unit and that on the remote module. This is normal, especially when the temperature at the remote module is fluctuating.

Remote Module Signal Indicators

-  Flashing, indicates the unit is attempting to receive the signal from the remote module.
-  Not flashing, indicates successful signal reception from the remote module.
Indicates a signal has not been successfully received from the remote module.

SELECTING THE TIME ZONE

Slide the time zone switch, located on the back of the main unit, to the correct position for the desired time zone:

- PST = Pacific Standard Time
("PST" will appear to the left of the time-of-day display.)
- MST = Mountain Standard Time
("MST" will appear to the left of the time-of-day display.)
- CST = Central Standard Time
("CST" will appear to the left of the time-of-day display.)
- EST = Eastern Standard Time
("EST" will appear to the left of the time-of-day display.)

DAYLIGHT SAVING TIME (DST)

Slide the DST switch, located on the back of the main unit, to the desired position. To observe Daylight Savings Time, set the switch to ON. To disregard Daylight Savings Time, set the switch to OFF.

SELECTING 12 OR 24 HOUR TIME DISPLAY

Each press of the 12/24HR button, located on the back of the main unit, will toggle the time-of-day display between 12 hour (AM/PM) and 24 hour (military) time. The display will indicate AM and PM when in 12 hour time-of-day display mode.

MANUAL CLOCK/CALENDAR SETTING

1. Slide the TIME SET switch, located on the back of the main unit, to TIME SET.
The time-of-day will flash.
2. Set the hour by pressing the HR button.
3. Set the minute by pressing the MIN button.
4. With the desired time-of-day on the display, slide the TIME SET switch to CALENDAR. The year will flash.
5. Set the year by pressing the YEAR button.
6. Set the month by pressing the MONTH button.
7. Set the day number by pressing the DATE button. (Once the year, month and day number have been selected, the main unit will display the proper day-of-week once the TIME SET switch is set to the LOCK position.)
8. With the desired date on the display, slide the TIME SET switch to the LOCK position.


NOTE: Manual changes made will be automatically overridden with the next complete signal reception from the Atomic Clock.

MANUALLY INITIATING SIGNAL RECEPTION

Atomic Clock—

If you have moved the main unit from a location where it was receiving a strong complete signal, it is recommended that you manually initial signal reception to insure that the unit will receive a complete signal in its new location.


To manually initiate signal reception:

Press and release the WAVE button, located on the back of the unit  will flash on the display, indicating that the unit is attempting to receive the signal from the Atomic Clock. (See the "Signal Reception - Atomic Clock" section.)

Remote Module—

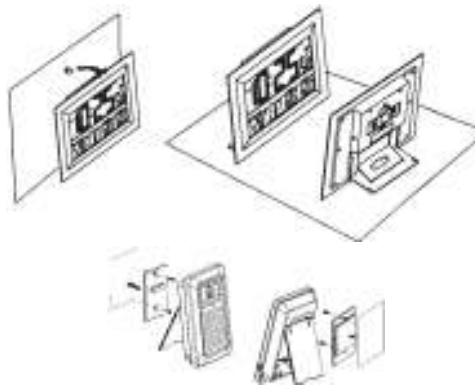
If you have moved the main unit or the remote module, it is recommended that you manually initial signal reception to insure that the main unit will receive a signal from the remote module.

To manually initiate signal reception:

Press and release the RE-SYNC button, located on the back of the main unit.  will flash on the main unit display, indicating that the unit is attempting to receive the signal from the remote module. (See the "Signal Reception - Remote Module" section.)

WALL MOUNT AND BENCH STAND

Both the main unit and remote module have built in bench stands. The units may also be wall mounted. See the following illustrations.



RESET BUTTON

Located on both the main unit and remote module, this button is only used when either unit is operating in an unfavorable way or malfunctioning, most commonly caused by ESD (electrostatic discharge) or radio interference. To reset either unit, press and hold down the button for 2 seconds. All settings will return to default values. Pressing the RESET button has a similar effect as removing and re-installing the batteries.

ALL OPERATIONAL DIFFICULTIES

If either unit does not function properly for any reason, try resetting both units (see the "Reset Button" section). If the units do not function properly after a reset, replace the batteries with new high quality batteries (see the "Battery Replacement" section). Low battery power can occasionally cause any number of "apparent" operational difficulties. Replacing the battery with a new fresh battery will solve most difficulties.

BATTERY REPLACEMENT

Erratic readings, faint readings, or no display are all indications that the batteries must be replaced. See the "Initial Set-up" section for instructions on replacing the batteries.

Warranty, Service, or Recalibration

For warranty, service, or recalibration, contact:

CONTROL COMPANY

4455 Rex Road
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Control Company is ISO 9001 Quality-Certified by
DNV and ISO 17025 accredited as a Calibration
Laboratory by A2LA.

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