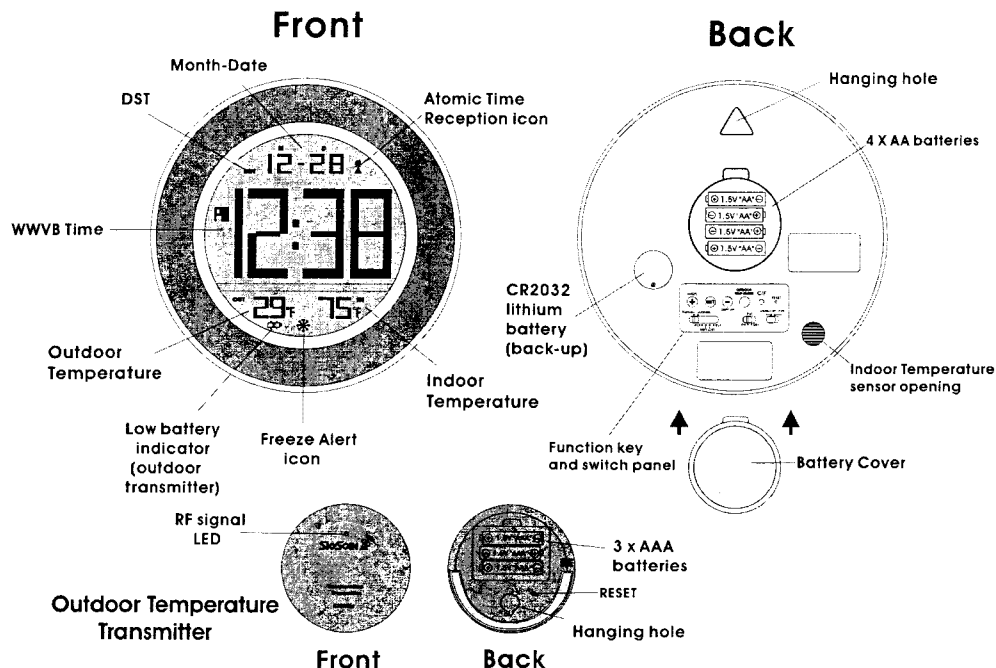




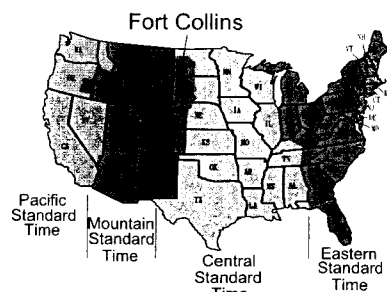
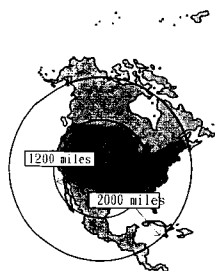
## Atomic Clock with Instant Time Setting Model 81112



### The SkyScan ATOMIC Clock

With the SkyScan Atomic 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.tl.nist.gov>



### ENVIRONMENTAL RECEPTION EFFECTS:

The SkyScan Atomic Clock obtains the accurate time with wireless technology. Same as all wireless devices, the receiving ability may be affected by, but not limited to, to the following circumstances:

- 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.
- Near computers and televisions.
- Bad weather locally or electrical storms between you and Colorado.
- 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 location where the reception is good. Avoid the following location, which can interfere with proper reception.



Inside or near concrete/ steel buildings or structures, unless the clock is close/ next to a window (with curtain open).



Next or close to power station.



Inside moving vehicles (automobile, train, airplanes etc) which radio transmission or electronics will interfere the reception of radio-controlled clock.



Near construction sites, traffic lights, roadside, neon lights etc.



Close to or on top of metal surfaces / plates.



Too close to household appliances (Computer, TV, video/audios, fax machines, speakers).

1. Synchronization signal reception can be received in Continental USA only. In other areas, you can still use this clock by switching to **RUN** and the correct time will appear.
2. Place your clock at a location with optimal signal, i.e.: close to a window away from metal surfaces or electrical appliances.

### TO START THE CLOCK

Remove the large round battery cover on the rear of the case. Insert 4 new "AA" alkaline batteries observing the correct + and - battery polarity. Replace the battery cover. Then slide the MODE switch from **STANDBY-BY** to **RUN** and the real US time will be displayed within 10 seconds.

### TO INSTALL BATTERIES IN THE TEMPERATURE TRANSMITTER

The outdoor temperature transmitter uses 3 new "AAA" alkaline batteries. The batteries must be inserted in the transmitter within 2 minutes after the atomic clock is activated with the MODE switch in the **RUN** position. Remove the battery cover on the rear of the case and install the batteries observing the correct + and - battery polarity. Replace the battery cover and place outdoors out of the direct weather within 100 feet of the indoor clock.

**IMPORTANT:** If no outdoor temperature is displayed, press **OUT TEMP FINDER** button once at the back of the Atomic Clock, then press **RESET** at the back of the temperature transmitter

**Do not set the clock until the outdoor temperature is displayed.** After a few minutes both the Indoor and Outdoor temperatures should be displayed on the clock. After the clock receives the outdoor temperature, the WWVB time code reception will automatically start. The clock will automatically update itself to the exact time, day, and date after receipt of the WWVB time code. This typically takes over night. Once a successful code is received, the radio reception icon will appear on the front display. The clock will automatically attempt to receive the WWVB signal every night at 1:00 am, 3:00am, and 5:00 am.

### TO SELECT TIME ZONE

Slide the "Time Zone" switch to display the desired time zone :-

- EST (Eastern Standard Time)
- CST (Central Standard Time)
- MST (Mountain Standard Time)
- PST (Pacific Standard Time)
- Alaska (Alaska Standard time)
- Hawaii (Hawaii-Alutian Standard Time)

Note: The Atomic feature will not work in Alaska and Hawaii due to the extreme distance from the NIST tower in Colorado.

### TO TURN ON/OFF the Daylight-Saving Time

Slide the "DST" switch to the "ON" position except when the clock is used in areas where DST is not applicable. The **DST** icon will be visible on the front display indicating that DST is ON.

### MANUAL SETTINGS

The Atomic clock is preset with current U.S. time. It will be up-dated by WWVB time signal daily. Manual settings are not needed.

## TO SET TIME, CALENDAR, 12/24 HR TIME DISPLAY FORMAT

When the WWVB time has not updated your clock, you can adjust the time and calendar manually.

1. Press and hold **SET** for 2 seconds, time digits blink. Press + / - to set your desired time. Press and hold + / - will accelerate setting in fast speed.
2. Press **SET** again, time digits change to year digits, press + / - to set the year.
3. Press **SET** again, upper month and date digits blink, press + / - to set month and date.
4. Press **SET** again, time digits change to **12 Hr** and blink, press + / - to select **12 Hr** or **24 Hr**. military time, PM will appear in 12 Hr time format.
5. Press **SET** to return to the normal time display. The clock returns to the normal time display if no other button is pressed for 5 seconds.

## TO CHOOSE DISPLAY OF TEMPERATURE, SECONDS OR DAY OR WEEK

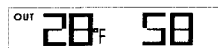
There are three possible modes to view the day, seconds, and temperature. The default display mode is Month / Date, Outdoor temperature and Indoor temperature.

To change the display:

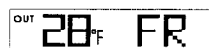
Press **DISPLAY** button. The lower LCD displays Outdoor Temperature and seconds.

Press **DISPLAY** button 2<sup>nd</sup> time, the lower LCD displays Outdoor Temperature and weekday.

Press **DISPLAY** button 3<sup>rd</sup> time, the lower LCD displays Outdoor Temperature and Indoor Temperature.



Outdoor temp. and seconds



Outdoor temp. and weekday



Outdoor temp. and indoor temp.

## IF YOU LOSE THE OUTDOOR TEMPERATURE

When the outdoor temperature digits show "----", the wireless transmission is either interrupted or lost. Press the **OUT TEMP FINDER** button at the rear of the clock to synchronize the wall clock with the remote sensor. The outdoor temperature should be received and shown on the display in few minutes. If the outdoor temperature does not appear on the display after 5 minutes, bring the remote temperature transmitter inside by the clock. Press **OUT TEMP FINDER** button again, then press the reset button on the transmitter. When the outdoor temperature appears on the clock (within 5 minutes), place the remote transmitter back outside. If you continue to lose the outdoor temperature display, try placing the transmitter to a different location.

## OUTDOOR TEMPERATURE TRANSMITTER


the range of the outdoor temperature transmitter may be affected by the temperature. At cold temperatures the transmitting distance may be decreased. Please bear this in mind when positioning the transmitter. Also the batteries may be reduced in power during periods of extreme cold temperature.




## TO SELECT DEGREE C OR F temperature readout

Press **C / F** button to select degree **C** or **F** temperature readout.

## TO START ATOMIC RECEPTION MANUALLY

Press + / **WAVE** button to start the WWVB atomic reception manually. The tower icon will blink.

If the tower icon  is scrolling, your clock is actively searching for the WWVB time code

NO TOWER ICON	NO SIGNAL DETECTION
BLINKING 	WEAK SIGNAL DETECTED
BLINKING 	STRONG SIGNAL DETECTED
STATIC 	SUCCESSFUL RECEPTION

## CLOCK BATTERY REPLACEMENT


When the display begins to look dim, it is time to replace the batteries in the clock. Slide the MODE switch from **RUN** to **STAND-BY**, then replace the 4 "AA" batteries observing the correct polarity. After the battery cover is secure, slide the MODE switch from **STAND-BY** to **RUN**.

## PLEASE DO NOT SET THE CLOCK AFTER YOU INSERT THE BATTERIES

Remarks:

- Do not mix old and new batteries
- Do not mix alkaline, standard (carbon-zinc), or rechargeable (nickel cadmium) batteries.
- For longer battery life, alkaline batteries are recommended.

## FREEZE ALERT:

The freeze alert icon  will appear on the clock display when the outside temperature has dropped below freezing.

## Outdoor Transmitter Battery Replacement:

The batteries should be replaced on an annual basis. When low battery icon is displayed on lower left LCD, you need to replace batteries of the outdoor transmitter. After new batteries have been placed in the transmitter, press the **OUT TEMP. FINDER** button once on the back of the clock, then the reset button on the back of the temperature transmitter.

## Memory Chip Battery:

The instant time memory is maintained by a lithium button cell battery, CR2032. The expected life of this battery is about 2 years. Be sure that the 4 AA batteries in the clock are fresh. The **MODE** switch must be in the **RUN** position when replacing this button cell battery. This battery is located in the small round battery compartment on the rear of the clock secured by a screw. Open the compartment with a screw driver and replace the battery observing the polarity. Then close the compartment securing with the screw.

## TROUBLE SHOOTING

When your clock displayed irrelevant time, calendar or temperatures, which might be caused by interferences of other wireless signal in the air e.g. TV, computer monitor, radios, walkie-talkie etc. Press **WAVE** or **OUT TEMP FINDER** once respectively to adjust to correct time and temperatures. If such situation still persists, press the **RESET** button to set the clock to factory default setting. However, the smart set US time will reset to default time. You will need to set the time and calendar manually to restore the smart set feature.

## STATEMENT OF FCC COMPLIANCE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

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 or 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.

## SPECIFICATIONS:-

Calendar range: 1/1/2000 to 12/31/2049

Outdoor temperature measuring range: -20C to +60C / - 4F to + 140F

Indoor temperature measuring range: 0C to 50C / + 32F to +122F

Temperature checking interval:-

Outdoor: every 3 minute

Indoor: every 1 minute

RF temperature transmission interval: every 3 minutes

Power up operation:

RF reception duration: 4 minutes

RC reception times: 1 AM, 3 AM, 5 AM

Remote transmitter transmission: instant transmission after power up

Transmission distance: up to 100 ft in open field, depending upon surrounding structures, mounting location and possible interfering sources

Power Source (Alkaline batteries recommended)

Atomic Clock: 4 x AA, 1.5V batteries, 1 x CR2032 Lithium battery (back-up)

Transmitter: 3 x AAA, 1.5V batteries

Battery life: about 12 months

## Warranty

This Product is warranted to be free of defects in manufacturing for a period of 2 years from the date of purchase. Defective clocks should be returned to the place of retail purchase.

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## For Customer Inquires

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Model 81112