

Instruction manual for the Atomic Radio Controlled Event Countdowner

1. Functions

- Ultra-precise time is automatically set by radio signals linked to the U.S. Atomic clock.
- Clock with perpetual calendar display.
- Daily alarm function.
- Count down function.

2. What is Atomic Radio Control?

The most precise time keeping device on earth is the atomic clock. It keeps time to the accuracy of better than 1 second for every million years. The atomic clock is a huge piece of scientific equipment and it is so expensive that it is normally found in laboratories and standards institutions etc. Thanks to the latest technology, the accuracy of the atomic clock is now brought to your home. The NIST* (National Institute of Standards and Technology) is broadcasting electronically encoded time signals based on an atomic clock from an antenna in Fort-Collins, Colorado to cover the mainland of the United States. The signal is picked up by the radio receiver circuit in your clock, and is then decoded to synchronize the time to within a split of a second precision. The radio signal automatically sets the calendar and daylight saving or standard time too.

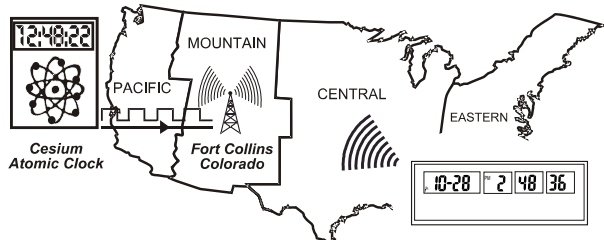


Fig. 1 Atomic radio controlled time signal transmission and reception

*For more information on the NIST transmission and cesium atomic clock visit website www.bldrdoc.gov/timefreq

Note: The clock is for use in USA mainland only. In the states of Alaska and Hawaii, the radio signal may not be strong enough for synchronization and the clock can only be used as a normal quartz clock that needs manual setting.

3. About your clock

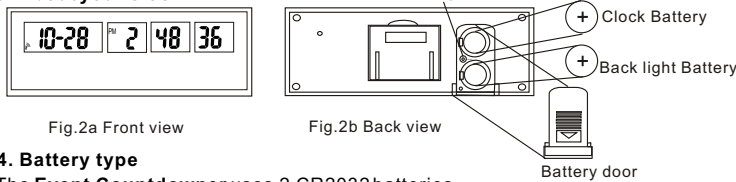


Fig. 2a Front view

Fig. 2b Back view

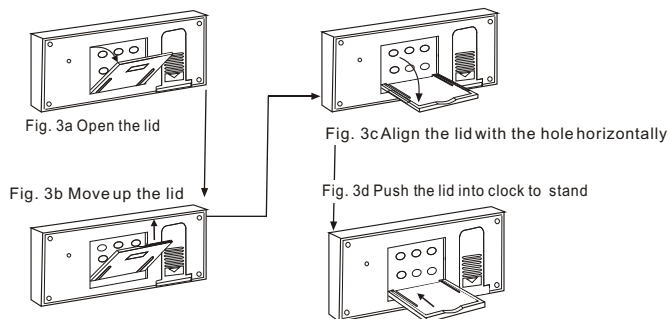
4. Battery type

The Event Countdowner uses 2 CR2032 batteries.

NOTE:

1. Dispose of the used batteries properly, in accordance to the environmental laws in your area.
2. Re-insert the batteries and then press **RESET** button inside the battery compartment if they are operating in an unfavorable way or malfunctioning.
3. In order to keep the setting of the clock, please change the battery one by one.

5. The use of your Event Countdowner on the table



6. Control buttons

The Event Countdowner is controlled by six push buttons at the back (Fig. 4)

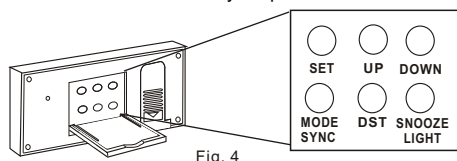


Fig. 4

7. Auto-synchronization

Once batteries are installed, the receiver circuit is activated. This is symbolized by the blinking of the Antenna icon (See Fig. 5a). The bars facing the Antenna indicate the strength of the radio signal, no bars means there is no or very weak signal received. One bar indicates a weak signal and 5 bars the strongest (see Fig. 5b). Use the radio signal strength indicators to find a location that the reception is strong. If the clock is too close to electrical appliances such as TV, mobile phone and computer, they may cause undesirable signal interference. Strong signal is normally found close to the window. In some areas where the signal is poor or less, you may need to position and rotate the clock until the best signal strength is obtained.

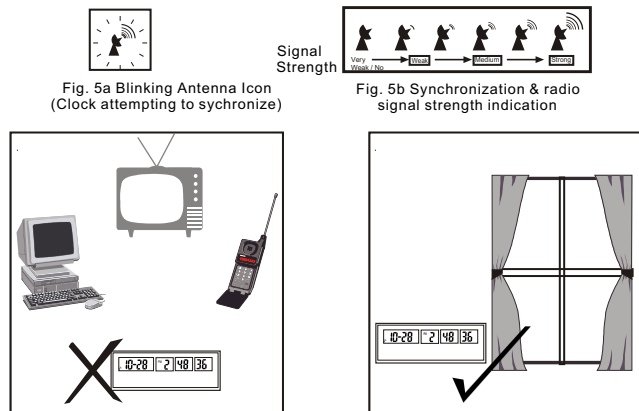


Fig. 5a Blinking Antenna Icon (Clock attempting to synchronize)

Fig. 5b Synchronization & radio signal strength indication

Fig. 6 How to position the clock for the best signal reception

Once you have found the optimal position leave the clock still so that it can pick up good signals. It normally takes 3 to 10 minutes to synchronize. Once it is successful, the clock will show extremely accurate time and the correct date. Successful synchronization is symbolized by the still antenna and the radiating beacon (Fig. 7). A properly synchronized clock attempts to adjust itself with the radio time signal every morning and if it fails for more than 3 days, the antenna icon disappears. 30 days failure to synchronize will shut off the synchronization and function as a quartz clock until you activate forced synchronization.

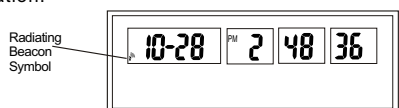


Fig. 7 Example of a synchronized clock

The clock is a radio device and like the mobile phone or the radio, in certain locations and at certain time of the day, it may not be able to pick up signal strong enough to synchronize. If the clock fails to synchronize in the first attempt, it will make a new attempt at the beginning of every hour afterwards till 12:00 am. In most cases, the clock synchronizes beginning of every hour afterwards till 12:00 am. In most cases, the clock synchronizes overnight as the radio signal is the strongest and cleanest in the early morning. You may leave the clock to synchronize to the right time later or you may temporarily set the clock manually. As explained below a manually set clock will still seek to synchronize itself automatically at the beginning of every hour.

8. Forced Synchronization and halt Synchronization

If you want the clock to attempt synchronization, you can force the clock to do so by pressing and holding the **MODE/SYNC** key. This will activate synchronization. If the clock is in synchronization mode then press and hold **MODE/SYNC** key will halt the synchronization.

9. Continuous normal display

The Event Countdowner normally displays continuously the number of days, hours, minutes and seconds, remaining to the target day or actual calendar and time (month, day). You can switch one of these displays by pushing **UP** or **DOWN**.

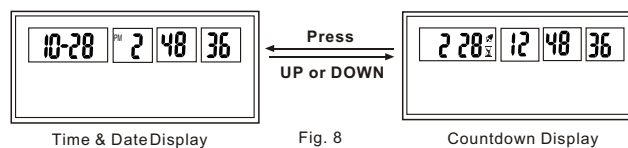


Fig. 8

10. To read other data or set clock

From one of the both continuous display modes above, successive push of **MODE** button will show data (Fig. 9): Mode A = current date, Mode B = current time, Mode C = target ON/OFF, Mode D = target date (month, day and year), Mode E = target time, Mode F = daily alarm time.

After releasing the **MODE** button, the display will return to normal continuous display in 10 seconds. However, if the **SET** button is pushed and held for 2 seconds in any modes (A, B, C, D, E or F), the clock enters into the setting mode of the corresponding data and the values can be set by pushing **UP** or **DOWN** buttons. The blinking digits or icons indicate the values to be adjusted.

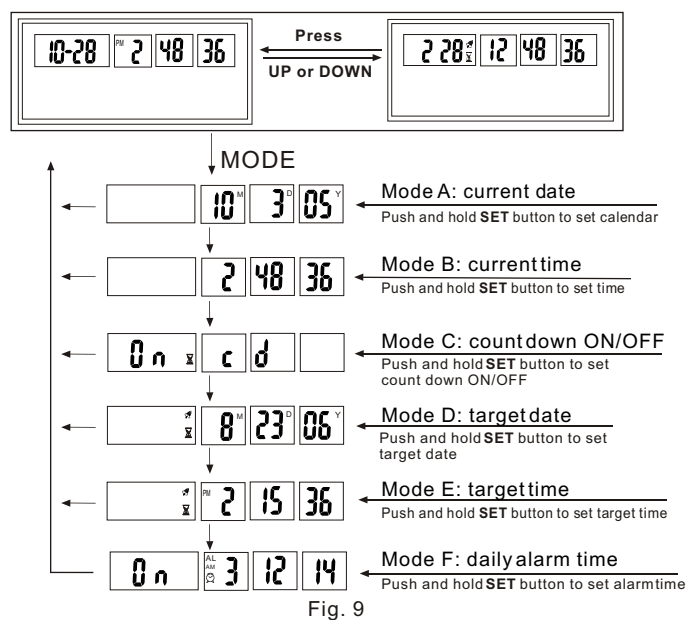


Fig. 9

11. Clock setting

11.1 Zone setting

Zone can be set in normal display mode as well as in time set mode. In normal display mode (time and calendar display), press and hold **SET** will enter zone setting mode. Change the zone by using **UP** or **DOWN** buttons. Press **SET** once again will leave the zone setting mode.

11.2 Current date set mode

Display will be as shown in Fig. 9, Mode A. Press and hold **SET** key for 2 seconds to enter the year set mode. Push **UP** or **DOWN** can select year. At each press of **SET** button after entering the year, setting will shift to month and day setting.

11.3 Current time set mode

While you are in Mode A, press the **MODE** button to enter Mode B (Fig. 9). **SET** button functions are the same as in above mode. Set sequence is 12/24 hour system (press **UP** or **DOWN** to change the 12/24 hour format). Then set hour, minutes and seconds setting (only to synchronize with 00 seconds).

11.4 Countdown ON/OFF set mode

While you are in Mode B (Fig. 9), press **MODE** to enter Mode C, the countdown setting. Press and hold now the **SET** button for 2 seconds. The **ON** or **OFF** will flash, then push **UP** or **DOWN** to turn on or off the countdown function.

11.5 Target date set mode

You are in Mode C (Fig. 9) and the countdown is on. Now press **MODE** to enter the new target date setting mode (Mode D). Setting in this mode is the same as in current date set mode.

11.6 Target time set mode

While you are in Mode D, press **MODE** button to enter Mode E (Fig. 9). In target time set mode, press and hold the **SET** button for 2 seconds to set hour, minute, second & target alarm ON/OFF. When hour, minute, second or target alarm are flashing, press **UP** or **DOWN** to adjust. When the target alarm is turned on, the bell symbol will appear on the display for 5 seconds to indicate the target alarm is on (In 12 hours system, pay attention to AM & PM signs). The bell symbol will disappear after 5 seconds, however the target alarm is still function until the target time is reached. The target time alarm is identified by beeps with a long break between. You can turn off the beeping by touching any button.

11.7 Daily alarm set mode

While you are in Mode E, press the **MODE** to enter Mode F (Fig. 9). **ON** or **OFF** will flash. Now, you can press **UP** or **DOWN** to switch the alarm on or off. Press and hold the **SET** button to enter the alarm hour, press again and you will enter the minutes setting. If you turn on the alarm, the sign will display on LCD. (In 12 hours mode pay attention to AM & PM signs). Daily alarm sound is identified by short, rapid beeps. You can turn it off by pressing any button except **SNOOZE**. Only to stop temporarily, press **SNOOZE** on the back of the Event Countdowner. In this case, the alarm will repeat for 4 times in every 5 minutes.

12. Summer and winter time

DST (Daylight Saving Time, summertime) or STD (winter time) can be set only in the normal display mode. If this mode shows the countdown timer mode, change the display to the clock and calendar first and then press and hold 2 seconds the **DST** button. Do not forget to re-set STD/DST at the end of the winter/summer time if you are using manual setting.

13. Display limits for new target time

The Event Countdowner can show a maximum of 1999 days 23 hours 59 minutes and 59 seconds at countdown. If the time difference exceeds this limit, the display will give the information "O FLO" (Fig. 10a). If the current time passed the target time, the display will present the no. of days and time that exceed the target time in the countdown display mode (Fig. 10b).

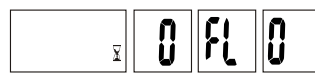


Fig. 10a



Fig. 10b

14. Back light

Push **LIGHT/SNOOZE** button at the back of the Event Countdowner to light up the LCD for reading in the dark. Please change the back light battery if the back light is dim.