Atomic Radio Controlled table/wall clock With Indoor Thermometer, and Wireless Caller line Identity

1. What makes "Atomic Caller ID clock" unique

Atomic radio control clocks are the most precise time keeping devices in the world. They keep time to the accuracy of more than 1 second in one million years. Until recently, the atomic clocks were only found in laboratories and special institutions and were very large and expensive. When various governments began to broadcast atomic, electronically encoded signals with their own national time, the accuracy of the atomic radio control clock became available to the general public. Recent technology enabled this process to be miniaturized and to be offered at a reasonable cost.

The N.I.S.T. (National Institute of Standards & Technology), broadcasts electronically encoded time signals, from the antenna located in Fort Collins, Colorado, based on the USA atomic clock. (For more information on the N.I.S.T. Transmission and cesium atomic clock, visit their website: www.bldrdoc.gov/timefreq

The word "atomic" is applied to the radio controlled clocks, which pick up the encoded signal and decode it, synchronizing within a split second of the Atomic N.I.S.T. clock. In addition, the radio signal automatically sets the calendar and adjusts for daylight savings or standard time.

The "Atomic Caller ID Clock" takes it one step further. The clock not only is able to receive and decode signals from Fort Collins, Colorado which covers all 4 zones in the continental USA, but also is able to receive the signals from your transmitter connected to your telephone and display the Caller name and telephone number on your clock.

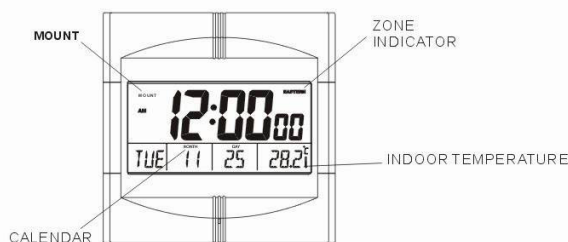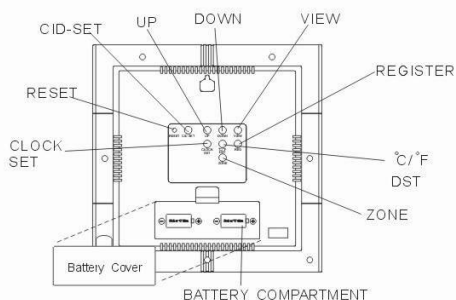## 2. GETTING FAMILIAR WITH THE WIRELESS CALLER ID CLOCK
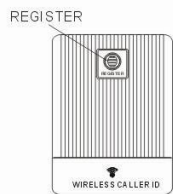

Fig.1 Front View

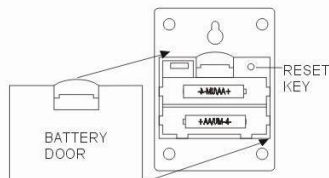Fig.2 Back View

Fig.3 Front view of remote sensor   Fig.4 Back view of remote sensor

3.GETTING STARTED

A) Batteries

The clock operates on 2 C-size batteries and transmitter operates on 2AA type batteries . Insert fresh batteries and make sure the polarities (+,-) on the batteries match the polarities (+,-) show in the battery compartment.

Note:

1.The clock is designed to maximize the battery life. The activation using fresh, new batteries will create a shadow effect on the LCD screen. This effect is only temporary and the numbers will become clear in only a few days .These batteries will last 6 months to 1 year (depending on the frequency of alarm and back light usage).

2. Dispose of the used batteries properly, in accordance to the environment laws in your area.

3. Press **RESET** button on the back of the clock and remote unit if they are operating in an unfavorable way or malfunctioing.

B) Wall Mount

Your clock can be wall mounted, using the keyhole provided on back center of the clock.

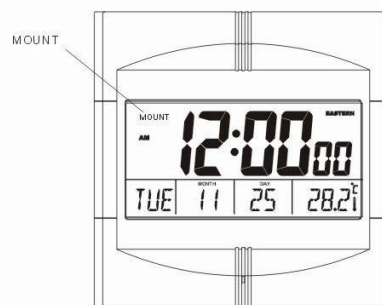## 4. Setting the Time and Date Through Synchronization

Fig.5 Example of synchronized clock

For optimum synchronization (see Fig. 7), place the clock in an area where the signal strength is strong (close to a window, etc.). Signal strength is indicated by the blinking bars radiating from the tower icon (one being weakest - five being strongest). See Figs. 6a and b, and Fig5. You may need to reposition or rotate the clock until the best signal strength is obtained.

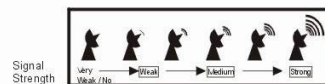Fig. 6a Blinking antenna Icon (clock attempting to synchronize)

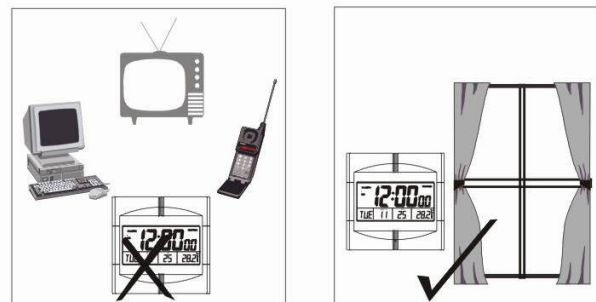Fig. 6b Synchronization & radio signal strength indication

Fig.7 How to position the clock for the best signal reception

Keep the clock away from TV's, phones, computers or other electrical appliances, which may interfere with the signal. Buildings with heavy steel construction or below ground locations, may not receive adequate signal strength to synchronize. A properly synchronized clock shows the antenna tower blinking on the display, with a radiating beacon.

Your clock is set to receive a signal every hour, for the first 24 hours, after the batteries are inserted. After the first 24 hours, a properly synchronized clock attempts to adjust itself with the radio time signal 4 times a day, early morning, before noon, afternoon and late night. If the clock fails to synchronize in 3 consecutive days, the antenna icon will disappear and the clock will function as a quartz clock, until the forced synchronization procedure is performed. (See paragraph C below)

If a clear signal is received the clock will take 3-10 minutes to complete the synchronization process. Once it is completed, the correct time and date are displayed. It is then necessary to set the clock with the appropriate time zone.

If unable to synchronize, it will attempt synchronization at the beginning of each hour, for the first 24 hours. If an attempt is successful, the clock will enter normal daily auto synchronization mode.

5. Setting the Time Zone

● Press **ZONE** to select the correct desired time zone.
● Press **ZONE** for 2 seconds to clear the time zone indication or press **ZONE** for 2 seconds to display the time zone indication.

6. Setting the Time and Date Using Forced Synchronization

The clock can be forced to attempt to synchronize at any time. Press "SYNC" for 2 seconds and the clock will start synchronization. Synchronization may not be immediate, so please allow some time for the clock to Synch .

7. Manual Setting the Clock

For the best visual quality on the display screen, avoid locations where there is a strong glare or reflection on the display lens.

To Set the Clock and Calendar

● Press and hold **CLOCK SET** key and 12h format will flash.
● Press **UP** or **DOWN** to select the 12h or 24 h format.
● Press **CLOCK SET** key again and Year Digit will flash.
● Press **UP** or **Down** to select the correct year.
● Press **CLOCK SET** key again and Month Digit will flash.
● Press **UP** or **Down** to select the correct Month.
● Press **CLOCK SET** key again and Day Digit will flash.
● Press **UP** or **Down** to select the correct day.
● Press **CLOCK SET** key again and Hour Digit will flash.
● Press **UP** or **Down** to select the correct hour.
● Press **CLOCK SET** key again and Minute Digit will flash.
● Press **UP** or **Down** to select the correct Minute.
● Press **CLOCK SET** key again and Second Digit will flash.
● Press **UP** or **Down** to will reset the second to 00.

Note:
While in setting mode, a long push on **CLOCK SET** will skip the next and subsequent setting modes and make an immediate shortcut to normal display mode.

8. To Set Daylight Saving/Standard Time

● Your clock has built in the auto Daylight Saving/Standard Time function. To adjust DST/standard time, simply press **DST** button.

9. To Select Celsius or Fahrenheit (°C / °F)

The thermometer display reading can be changed to read the temperature, either Celsius (°C) or Fahrenheit (°F). Press the °C / °F button to read one or the other.

10. Wireless Caller Line Identity

Your clock has a special wireless Caller Line Identity function, which can display the telephone no and Caller Name on your clock.

A) Register the Remote Sensor

After installing the batteries into both the clock and the caller ID remote sensor, you must register the clock with the remote sensor. To do the recognition, press the registration key **REG** at the back of the clock and then press the **REGISTER** key of the remote sensor. Now you will see a word "SUCCESS" on the clock display. This shows that the registration between the sensor and the clock is successful. If this word did not display on the LCD for 10 seconds LCD will show "ERROR", this means the registration is not successful and you may have to check the installation and redo the registration process.

Fig. 8 Clock register the caller ID function

After the registration is successful connected the remote sensor, you have to connect the remote sensor to the telephone line via the line in socket. The remote sensor can be wall mounted using the key hole provided on back of the Unit.
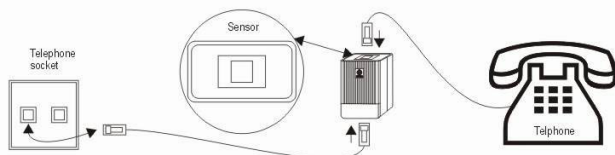

Fig. 9 Connection the sensor with telephone socket

To make sure your installation is successful you can press the register button on the remote sender unit and see if a word UNKNOWN will display in your clock. You can also try to call your home number using another phone to double confirm this process.

Note: When there is telephone call in, the button part (calendar and temperature display part) of the clock lights up for easy reading.

B) Using and setting your caller ID clock

There are 4 keys to operate the caller ID.

1.) VIEW key: Used to view last caller Name (if data available in memory), if there is a name for the number in memory another press will show the number.

2.) CID-SET key: Use to set a name for last received call and input if it is not in the memory, to enter new data (names and numbers) into memory or to delete data.

3.) UP key: To increase numbers or alphabet and to see next data in ascending order

4.) DOWN key: To decrease numbers or alphabet and to see next data in descending order

To view the last calling number

Your clock can display the last 10 caller Name.
Press **VIEW** and then press **UP/DOWN** Key to check the last caller Name. If the call is the current day, each press on **VIEW** and **UP/DOWN**, the clock will show the telephone number with the calling time. If it is not the current time, the time will show -1D, -2D, -3D (one day, two day or three days from the current day).

To see the data in the memory:

While not in a setting mode, Press **UP or DOWN** will show the data in the memory (NAME) in alphabetical order. You can see data in alphabetical ascending order by pressing **UP** or descending order by pressing **DOWN**. When a name is displayed, a short push on **VIEW** to read the memorized number corresponding to displayed name.

To delete a data in the memory:

When the required data to be deleted is being displayed in LCD apply a long push (4 seconds) on CID-SET (ERASE) key will delete the number and the corresponding name. At pressing the **CID-SET (ERASE)** key the NAME will blink for 2 seconds and then the word "ERASING" will blink for 2 seconds. Blinking is to warn user that the number is erasing now. If user keep on pressing this key for 4 seconds the blinking "ERASING" will become static and change to "ERASED" This will show on the LCD for another 2 seconds and the display will return to normal display mode. Erasing occurs only after the press and holding of the key reaches 4 seconds. If user releases the button before 4 seconds completion and before seeing the word "ERASED" the memory will remain un-erased.

To input a name for last call-in number:

When a caller has just called in and a last call number is being displayed or if the last call-in number is a new number and also not a UNKNOWN press view will show the number. Once the last called in new number is displayed press **CID-SET** will change the display to "INPUT NAME" and press **UP/DOWN** will immediately change the first digit position to blink and scroll the alphabet and let the user to select the first letter of the name. After selecting the correct letter, pressing **CID-SET** once will shift the blinking cursor to next digit and select the required letter. After inputting the name to confirm user has to press and hold **CID-SET** key for 2 seconds. This will confirm the input of the name and return to normal display mode.

To input a new number:

When display is showing the calendar and time press and hold **CID-SET** will show "INPUT NUMBER" in lower display line. Once user press **UP** or **DOWN** keys the display will enter number selection for first digit of the currently in putting number. Press **UP** or **DOWN** keys will scroll between 0 and 9 and once the first digit is selected press **CID-SET** will confirm the first digit and shift to input the second number. In the same manner, use **UP** or **DOWN** keys to select the number for currently setting digit. Once the number input has been done to confirm the input press and hold **CID-SET** key for 2 seconds. This will turn the display to show "INPUT NAME". Using the same manner input the name and confirm by press and holding **CID-SET** key for 2 seconds. This completes the new number and name input. Pressing **CID-SET** key for 2 seconds will return to the normal display.

To modify a name or number:

It is not possible to modify a number or name. If it is necessary to modify a number or a name user has to delete the data to be modified and input new number.

To input letters:

In name input modes use **UP** or **DOWN** keys will scroll the alphabet and numbers to select the required data to be input. At the beginning currently setting digit will show a blank cursor and blink. Press **UP** will select the alphabet in ascending order while **DOWN** key will do it in descending order. User can select any letter a blank space "-" or a number for currently setting digit in following order. A B C D E F G H I J K L M N O P Q R S T U V W X Y Z "-" 0 1 2 3 4 5 6 7 8 9. To select a blank space select "-" and press **CID-SET** to confirm. During the input process if user finds that there is a mistaken letter or number user can use **VIEW** key as a backspace to delete the last letter until it reaches the letter or number to be corrected. After correcting user has to input the rest of the numbers from the correct Digit.

Note:
1. In any data input mode or caller ID display mode if user did not press any key for longer than 10 seconds, display will return to normal time and calendar display mode.
2. In all set modes press and hold **UP** or **DOWN** keys we will enter auto fast increment or decrement mode.
3. All details displayed (not in setting modes) will be auto centered. In setting modes letters or number input will start from the left most position and switch towards right, digit by digit until complete the setting.
4. If the received number does not have any encoded BCD data than the display should show "UNKNOWN"

Special Notes:
Please note the maximum range of operation of the wireless sensor is 30 meters (100 Feet). Barriers like walls, shelves and presence of electrical devices in the proximity shorten the operating range.

PI-EX899CID

<u>Notice 1</u>

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

<u>Notice 2</u>

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.