

## ANALOG/DIGITAL ATOMIC WATCH INSTRUCTIONS

Our innovative timepieces incorporate a miniature antenna and receiver with ARCRON technology to intercept the U.S. government's time signal, broadcast from the WWVB radio station in Fort Collins, CO. The time is generated from the U.S. atomic clocks, which are operated in Boulder, Colorado by the National Institute of Standards and Technology - NIST ([www.NIST.gov](http://www.NIST.gov)).

Your watch automatically sets itself and precisely synchronizes with the NIST time signal each day. ARCRON technology also performs internal checks to calibrate the quartz oscillator and maintains extraordinary accuracy, even when the signal is not received every day. This feature ensures continued accuracy and synchronization when traveling outside North America. ARCRON watches will always be more precise than ordinary quartz watches.

### GETTING STARTED

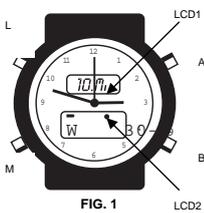


Fig.1 illustrates the operating buttons and display on the ARCRON watch.

1. Press and hold button L to light the display
2. Press and release button M to switch Modes
3. Press and release buttons A and B to set displays in the different Modes.

### Other symbols on the watch face

- Battery** flashes in LCD2 when battery is almost empty, steady means the battery is ok
- Stop Watch Function** flashes when stop function is active
- Daylight Savings** active during daylight savings time (DST)
- Aerial Tower** indicates reception status
- Alarm** is visible when alarm is set

### MODE CHART

| Mode 1                | Mode 2                    | Mode 3                 | Mode 4                         |
|-----------------------|---------------------------|------------------------|--------------------------------|
| TIME<br>week day/ day | CHRONO<br>week day/ day   | ALARM<br>week day/ day | DATE<br>primary time zone (US) |
|                       |                           |                        |                                |
| secondary time        | counter                   | alarm time             | week day/ month/day            |
| CHECK TIME ZONES      | START/STOP                | SET ALARM TIME         | DST Mode                       |
| Set time zones        | Split/ Reset              | Alarm on/off           | Activate/ Deactivate DST       |
|                       | A or B short<br>A > 4 sec | A short<br>B short     | A > 4 sec<br>A short           |

### **MODE 1- TIME**

The ARCRON watch displays two different times. The hands on the clock will always display primary time (analog). LCD 2 will always display the secondary time.

Since the time is auto set by the ARCRON technology, **the only necessary adjustment is to the time zone.** Initially, both the primary and secondary time zones are set to Pacific Time.

### **Checking Reception Status**

The watch will automatically activate reception at 2:00am

Jan-Jun and 3:00am

Jul-Dec local time.

To check reception status complete the following steps:

- 1.If not already in Mode 1, press and release button M to go to Mode 1.
  - 2.Press and hold button B for 4 seconds (release button B when Aerial Tower symbol appears, which should be after 4 seconds of holding). The Aerial Tower symbol will appear in the LCD2 display for one minute. (This step will manually activate reception.)
- If the symbol is steady, the watch has received a signal in the last 27 hours.
  - If the symbol is flashing, the watch has not received the signal in the last 27 hours.

The watch may take up to two days to receive the signal. For best reception, place in a window and away from electrical appliances and metal walls for best signal reception.

### **Checking the Time Zone**

Press/release button A or B to display both time zones. LCD 1 shows the primary time zone. LCD2 shows the secondary time zone. In the display, the first digit is the time zone. The second digit indicates A (M) or P (M), the third and fourth digit offsets to Greenwich/UK in hours.

### **SETTING THE TIME ZONE**

To set the primary time zone:

- 1.If not already in Mode 1, press and release button M to go to Mode 1.
- 2.Press and hold button A until the digits are flashing on LCD 2.
- 3.Press/release button A to select the desired time zone.

**Note:** Time zones will appear in the following order:

P > M > C > E > (-4) > (-3) >  
(-2) > (-1) > UTC > (+1) > (+2) ...(+12) > (-12) ... (-9) > P

- 4.To set the primary time zone, press and hold buttons A and B simultaneously for four seconds or longer.
- 5.To set the secondary time zone, repeat steps 1-3 (omit step 4) of the primary time zone steps above.

### **Disabling Daylight Savings Time (DST)**

Setting the DST to on/off is only possible when the primary time is set to a US time zone. The DST symbol in LCD2 is always related to the primary time zone.

To disable the DST function:

- 1.Press and release button M to go to Mode 4.
- 2.Press and hold button A for longer than four seconds.
- 3.Press and release button A to enable/disable DST.
- 4.Press and release button M to exit.

The DST function is set the same for both primary and secondary settings. If the primary time zone is non-DST and the secondary is DST, disable DST and set the secondary time to the next time zone.

## **Mode 2- CHRONO**

The maximum range on the stopwatch is 9 hrs: 59 min:

59 sec. 9/10 sec. If the time exceeds this limit, the watch will reset to 0:00.0.00. To use this function, complete the following steps:

1. Press/release button M and go to Mode 2. The stopwatch function symbol will appear in LCD 1.
2. Press/release button A to start stopwatch, press button A again to stop.  
The stopwatch function symbol on the LCD will be flashing to indicate it is running and steady when it is stopped.
3. Press/release button B while the stopwatch is running to store and display a split time. The colon and the two decimal points on LCD2 will be flashing.
4. Press/release button B again to show actual running stop time again.

**Note:** All button presses are confirmed by a short beep. To reset the counter, push button B until a long beep is heard.

## **Mode 3- ALARM**

The default alarm is set to 0:00 and inactive. The alarm is synchronized with the primary time. The stored alarm time and its status are shown in LCD2. The alarm is active when the bell is visible. When the bell is invisible, the alarm is inactive.

### **To activate/deactivate:**

1. Press and release button M to go to Mode 3. AL will appear in the right, lower corner of the LCD2 display.
2. Press and release button B for more than 4 seconds. A beep will confirm alarm status.

To set/change alarm time:

1. Press and hold button A for longer than 3 seconds, while in Mode 3. The alarm will set to active status and the hour and minute digits will be flashing.
2. Press/release the A or B buttons to change the flashing digits. Pressing and releasing the button once will increase/decrease the value by one. Pressing and holding the button for 2 seconds or longer will increase/decrease the value by 10.
3. Press/release the M button to store the changed values and return to Alarm Mode, or watch will automatically store the values and exit 12 seconds after pressing the A button.

### **Alarm Tone**

When an activated alarm reaches the set time, you will hear a tone lasting 30 seconds. Press/release M, A, or B button to stop tone.

## **TROUBLESHOOTING**

### **Manual Set**

Only to be used after battery replacement.

If the watch has *never* received valid time information between battery replacements, the time may be manually set. The date will always be correct, even with no reception, because of an internal “everlasting calendar” for 2000-2099. To set the time:

1. In Mode 1, press/hold button M for 3 seconds. The LCD displays will become dark and digits will begin flashing.
2. Press/release the A or B button to change the flashing digits and set the current time.
3. Pressing and releasing the button once will increase/decrease the value by one. Pressing and holding for 2 seconds or more will increase/ decrease the value by 10.
4. Press/release button M once after time is set.
5. Press/hold buttons A and B simultaneously four seconds or longer to store new time.

### **HAND ADJUSTMENT**

If the watch receives an extreme shock while the second hand is moving, or if the watch has been improperly adjusted, attempt to complete the following steps:

Press and hold button B for 12-16 seconds, while in Mode 1. A flashing “AD12” will appear in the first 4 digits of the LCD2 display. The analog hands will rapidly advance to the 12:00 position and stop there.

If button B fails to be released in the 12-16 seconds, the watch will reset to normal mode.

If hands set to 12:00, leave watch alone and your watch will attempt reception.

If the hands fail to stop at the 12:00 position, complete the following steps:

1. Press/release button A. Pressing and releasing the button once will increase the value by one.
2. Press and holding the button for 2 seconds or longer will increase/ decrease the value by 8Hz, while the button is pressed.
3. Press and hold the button for longer than 8 seconds, the second hand will advance with high speed. The hands will continue to move until button A is pressed/released again. Be sure to stop the hands just before they reach the 12:00 position.
4. Two seconds after button A has been pressed, a reception attempt is made. The watch will keep the old time, if signal was not received. Attempt the Hand Adjustment process at another time when signal is stronger or when watch is facing Colorado.
5. Press/hold buttons A and B simultaneously for four seconds or longer to store the new time.

### **SERVICE:**

**It is recommended that service be performed by a professional jeweler or a qualified professional only.**

#### *Battery Replacement:*

Requires battery CR1620. Your watch is a delicate instrument and requires special tools for changing the battery; therefore, we recommend that **qualified personnel only change the battery in your watch.**

#### *Band Replacement:*

The band on your analog/digital watch can easily be changed to your styling preference.