The Ohsen AD1610 wristwatch

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ABSTRACT

The Ohsen AD1601 is a very handsome but quirky men's wristwatch with both analog and digital aspects. The analog aspect (quartz crystal controlled) is conventional, with hour, minute, and center seconds hands. The digital aspect uses a small display window to provide for a number of features, including chronograph operation. The size and location of the digital display window makes these features somewhat impractical. The instructions provided by the manufacturer are in Chinese on one side and sort-of English on the other. In addition to being hard to follow, they do not seem to accurately apply to this model. This article describes the watch, and provides (hopefully) clearer instructions for use and setting.

1   Introduction

1.1   Manufacturer and distribution

The Ohsen model AD1601 wristwatch is made by the Guangzhou Ohsen Watch Co., Ltd., Guangzhou, China. A major distributor is 360SportWatches, also of Guangzhou.

It is available from numerous Internet sellers. At this writing, the price varies from about $13.00 up.

1.2   Description

In figure 1 we see an Ohsen AD1601 watch.

The watch is described as "army military style". It is said to be water resistant to a depth of 30 m (100 ft).

It is a rather large watch, with a 45 mm diameter case. The weight (with typical band) is about 3.5 ounces (100 g).

The manufacturer's Web site shows this model available in several different color schemes, with various band types. The one most commonly available from Internet sellers is the AD1601-3, with an olive drab-like face color and an olive drab canvas band with a conventional buckle. We see that style in the figure. The author's personal watch is of that scheme.

Figure 1. Ohsen AD1601-3 wristwatch

The watch is nicely finished, and the details (some rather quirky) are nicely executed.

1.3   Features

The watch comprises an analog aspect (quartz crystal controlled) with conventional hour, minute, and center seconds hands, and a digital aspect, which mainly manifests as the small display window located at the 3 o'clock position. The digital aspect provides:

- a time indication, which can be made to work on a 24-hour basis, and could be used to carry the time in a second time zone. This indication is not in any way synchronized with the analog time indication.

- date and day-of-week indication (the date needing to be "called up" into the digital display window).

- a chronograph function with single lap/split capability

- an alarm, which can be enabled or disabled.

Sadly, the location and small size of the digital display window makes the use of the digital features rather impractical. For one thing, the

view of that window can be fully obscured by the analog minute hand and mostly obscured by the hour hand.

There is LED backlighting for the digital display window and three little "dials" at 6, 9, and 12 o'clock (the purposes of which will be described subsequently). There is no backlighting for the face itself. The analog hands are phosphorescent ("glow in the dark") but that seems to be ineffectual unless the watch is exposed to daylight to "charge" them.

There is also a "chime" (beep) on every hour, which can be enabled or disabled.

1.4   The crown cap

The odd apparatus seen on the right side of the watch revolves around a screw cap covering the crown that is used to set the analog aspect. The cap provides a waterproof seal for the crown (although other water-resistant watches are able to provide a seal for the crown without need for such a cap). The cap also prevents inadvertent resetting of the time on the analog aspect. The strut seen below the cap prevents loss of the cap when it is removed for setting the analog aspect. But the rig is "overkill", and is probably intended to be "cute".

1.5   Field of use

As to the most likely use for this watch, I would describe it as desirable when one wishes to wear a watch that is stylish and modern but not too conventional. (A colleague describes the watch as "modern steampunk").

Figure 2. Control buttons

2   The control buttons

In figure 2 we see the identification of the four control buttons on the case (and the crown cap). (This picture is of another color style of the same model.) Here I will use the button names; the letter identifications are those used in the official instructions for the watch.

3   Using the watch

3.1   Time–analog aspect

The analog aspect is wholly conventional, with a center seconds hand ("sweep second hand"). This is the only practically useful aspect of the watch!

3.2   Time–digital aspect

In its "normal" mode, the time is displayed in the small digital display window in hh:mm:ss fashion.

"A" for AM or "P" for PM appears in the upper left corner of the window (unless the display is set for the "24-hour" format).

3.3   Date

By pressing (and holding) the start button the digital display changes from time to date, showing the date in mm:dd form. While showing the date, the upper half of the "dial" at 6 o'clock (labeled "Date") is black.

3.4   Day of the week

The day of the week is indicated on the small circular dial at the 12 o'clock position. It has seven little "petals" marked with abbreviations for the days of the week. The current day "petal" is black.

3.5   Chronograph

3.5.1   *Chronograph mode*

The watch is put into chronograph mode by pressing the mode button once.

3.5.2   *Basic timing*

If the display does not show 0:00.00, reset it by pressing the reset button.

To start the time measurement, press the start button. The ongoing elapsed time will be shown in minutes, seconds, and hundredths of a second. To finish the time measurement, press the start button again.

After the time has been noted or recorded, press the <u>reset</u> button to return the display to 0:00.00 for the next use.

3.5.3   *Interrupted timing*

Perhaps the activity that is being timed is interrupted (maybe the ditch digger takes a break). To start the measurement, press the <u>start</u> button. To suspend the time measurement, press <u>start</u> again. The display will show the accumulated time to that point; internal advance of the time is also halted. To resume the time measurement, press <u>start</u> again, and so forth. At the end, press <u>start</u> one last time to stop the time advance. After the time has been noted, press the <u>reset</u> button to return the display to 0:00.00 for the next use.

3.5.4   *Lap/split measurement*

This modality is often used in sporting events where it is desired to capture and record the elapsed time at certain points in the event, such as the end of each lap.

At the beginning of the event, press the <u>start</u> button. as usual. At the end of the first lap, press <u>reset</u>. The time display will "freeze" so it can be noted and recorded. However, the cumulative time measurement is still running internally.

As soon as the time shown as of the end of the first lap has been noted, press <u>reset</u> again. The displayed time will now jump to the current cumulative time and will continue to show the ongoing cumulative time.

At the end of the second lap, press <u>reset</u> again. Again, the time display will "freeze" so it can be noted and recorded. After it has need noted, press <u>reset</u> again. The display will now show the ongoing cumulative time. And so forth.

At the end of the event, press <u>start</u>. The time shown will "freeze" and the internal time no longer runs. After the end time has been noted, press <u>reset</u> to zero the display.

3.5.5   *Two-finish measurement*

This is useful, for example, when we wish to catch the finish time for two competitors in an athletic event who finish at very nearly the same time.

At the start of the event, press <u>start</u> to begin timing in the usual way. When the first competitor finishes, press <u>reset</u>. The display will freeze at his finish time (but the internal time continues to run). When the second competitor finishes, press <u>start</u>. The time count will stop at his finish time, but the display will still show the first competitor's time so

it can be noted at your convenience. After that has been noted, press reset. The second competitor's time will then be shown. After that has been noted, press reset again to zero the display.

3.5.6 *State indication*

When in chronograph mode, the state of the chronograph can be seen in the "dial" at 12 o'clock by a pattern of the day of week "petals" being black, as shown in this table:

State	Su	Th	Fr	Sa
Stopped	X		X	X
Running	X			X
Lap freeze	X	X		X
Lap/stop*	X	X	X	X

* Refer to section 3.5.5; this is the state after both competitors have finished.

3.5.7 *The tachymeter scale*

On wristwatches with a chronograph feature that uses the center seconds hand (not this watch), there is often a *tachymeter scale* on the bezel. This is used in time study work when it is desired to know how many times a certain operation can recur in an hour. One occurrence of the operation is timed with the chronograph. (We assume that the duration of the operation is not over 60 seconds.) The duration of the operation is read with the seconds hand on the regular seconds scale. The number of operations of that duration that can be conducted in an hour is read with the seconds hand on the tachymeter scale.

This watch also has a tachymeter scale, but it is mainly for "show"; this watch does not use the analog center seconds hand for the chronograph.

I suppose that one could measure the time of an operation with the chronograph, note the time on the digital display, look at the corresponding time (in seconds) on the watch face, and note the adjacent value on the tachymeter scale.

3.6 **Alarm**

3.6.1 *Setting*

Setting the alarm is discussed in section 4.3.

3.6.2   *Seeing the alarm time*

By pressing (and holding) the reset button the digital display changes to showing the current alarm setting. While showing the date, the lower half of the "dial" at 6 o'clock (labeled "Alarm") is black.

3.6.3   *Activating/deactivating the alarm*

To activate or deactivate the alarm, press and hold reset and press start. If the alarm is activated, the lower half of the "dial" at 6 o'clock (labeled "Alarm") will be black.

3.7   Viewing the date

To view the date, with the watch in normal time mode, press and hold start. While it is held, the display window will show the current date in mm-dd form.

While the date is being shown, the upper half of the "dial" at 6 o'clock labeled "Date") will be black.

3.8   Current day of the week

In the "dial" at 12 o'clock, the "petal" for the current day will be black.

3.9   Backlighting

The LED backlighting for the digital display window and the three little "dials" is turned on by pressing the light button.

Whether the button is pressed momentarily or held for a long time, the illumination persists for about 3 seconds.

4   SETTINGS

4.1   Setting the analog time

Remove the screw cap over the crown. Pull out the crown. This will stop the advance of the watch. (Ideally, wait until the seconds hand is at zero before doing this.)

Turn the crown until the hour and minutes hands show the upcoming proper time. "On the mark" for that time, press in the crown. The analog aspect will now be advancing.

Replace the screw cap. It should be run "home" but should not be tightened hard.

4.2   Setting the digital time and date

We start with the watch in normal mode. Press the mode button three times. The current time will still be shown in the display window; the seconds field will be flashing. When the actual time reaches an even minute, press the start button. This will force the seconds on the digital display at 00. Then it will continue to advance.

Press the reset button. Now the minutes field will be flashing. If needed, press start to advance the minutes to the current minutes value.

Press the reset button. Now the hours field will be flashing. The start button will advance the hours value.

The hours value will advance from 12 to 11 followed by "A" to mean AM. Then it will advance from 12 through 1 to 11 followed by "P" to mean PM. Then it will advance from 0 to 23 followed by "H", meaning that if this hour value is adopted operation will be on a 24-hour basis.

If needed, advance the time until it is the correct value in the desired display form.

Press the reset button. Now the date will be displayed, with the day flashing. Press start to advance the day to the desired value.

Press the reset button. The date will still be displayed, with the month flashing. Press start to advance the month to the desired value.

Press the reset button. The date will still be displayed. On the weekday "dial" (at 12 o'clock) the current weekday will be flashing. If needed, press start to advance the weekday to the proper value.

If this all went as planned, press mode to return to normal operation. But if one of those settings is still not correct, do not press mode but press reset to step the "active" field (shown flashing) from seconds to minutes to hours to month to day to weekday and then back to seconds. When you get to the desired field, press start to advance its value.

After the correct values are now all in place, press mode to return to normal operation.

4.3   Setting the alarm

4.3.1   *Alarm time*

Starting with the watch in its normal mode, press mode twice. The current alarm time setting is shown, with the hours flashing. If needed, press start to advance the hours to the desired value.

If setting the minutes is needed, press <u>reset</u>. Now the minutes field will be flashing. Press <u>start</u> to advance the minutes to the desired value.

If this all went as planned, press <u>mode</u> to return to the normal mode of operation. But if one of the values is wrong, do not press <u>mode</u> but press <u>reset</u> to cycle the active field (shown flashing) from hours to minutes and back to hours, as needed. After the correct values are all in place, press <u>mode</u> to return to normal operation.

4.4   The hourly "chime"

To enable or disable the hourly "chime", press and hold <u>reset</u>, then press <u>mode</u>. Each time <u>mode</u> is pressed, the mode toggles between "enabled" and "disabled". The current setting can be seen in the "weekday" window (at 12 o'clock) so long as <u>reset</u> is held: if the mode is "enabled", all seven weekday "petals" will be black; if the mode is "disabled", no weekday petals will be black.

4.5   The "1/100 sec" "dial"

The "dial" at 9 o'clock is labeled "1/100 sec". When the watch is in the normal mode, the dial flashes between all black and a white disk reminiscent of a clock face. The flashing follows an odd 10-second pattern: "clock face" for one second, black for two seconds, "clock face" for one second, black for two seconds, "clock face" for one second, black for three seconds.

When the watch is in chronograph mode, this dial is steadily black.

When <u>start</u> is held to see the date or when <u>reset</u> is held to see the alarm time setting, this dial is in its "clock face" mode.

4.6   Mode indication

The mode the watch is in is shown by the pattern of the "petals" in the "dial" at 12 o'clock, as follows:

• Normal mode—Current day of week petal is steady black

• Chronograph mode—depends on state of chronograph (see section 3.5.6);

• Alarm setting mode—**Mo** petal flashes black.

• Time/date/day setting mode—**Tu** petal flashes black (until we get to the day of the week setting phase; then the currently-set day petal is steady black).

5   Power

The watch is powered with one CR2025 lithium battery.

6   CONCLUSION

The Ohsen AD1601 watch is handsome and nicely finished. Its digital features are impractical to use owing to the size and location of the digital display window. Some of its design and behavior is quirky. But it is very impressive. It's a great watch to wear when one wants to seem "stylish but eccentric", without going so far as to wear a classical *steampunk* watch[1]. *C'est moi*.

7   ISSUE RECORD

Issue 1 (this issue), March 10, 2019. Initial issue.

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[1] With faux pressure gauges and steam pipes (or maybe faux vacuum tubes) sticking out here and there.