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**Casio C-801 Calculator Alarm Watch**

A close up of a cell phone

Description automatically generated

Short Description: The C-80 series of watches, released in 1980, were the first Casio calculator watches. There were three models, differentiated by the materials and colours used, but electronically and functionally all were identical. The calculator supported four functions: add, subtract, multiply and divide. The watch also provided day, month, year information and incorporated stop-watch functionality.

Bill Buxton’s Notes

The Casio C-801-1 was one of a family of three digital watches, all released in 1980, which constituted Casio’s first calculator watches. They all contained the same electronics – Module 133 – but differed in the style and/or materials of the casing and strap. The C-801 and C-701 had stainless steel housings and straps, while the less expensive C-80 version’s strap and casing was in black plastic (images of it can be seen in the two accompanying advertisements, which date from the same year.

This watch is largely in the collection to serve as a contrast to two other calculator watches with similar functionality. Both from 1984, one is the [TC-600](http://research.microsoft.com/en-us/um/people/bibuxton/buxtoncollection/detail.aspx?id=232), and the other, the [AT-550](http://research.microsoft.com/en-us/um/people/bibuxton/buxtoncollection/detail.aspx?id=227). Like the C-801, each was from Casio, had a stainless steel strap and casing, incorporated a 4-function calculator. Each was set to calculator mode by pushing the bottom button on the left-hand side of the casing.

What was different was the nature of the interaction through which the calculator was operated.

The C-801, like most calculator watches, had a mechanical keypad incorporated into the watch casing. The 12 buttons on the keypad were used to enter the digits 0 – 9 as well as the decimal “.”, and the addition “+” operator. From top-to-bottom, the four buttons on the right hand side of the device were used to enter the divide “÷”, multiply “×” and subtract “-“and equals “=” operators.

In contrast, the [TC-600](http://research.microsoft.com/en-us/um/people/bibuxton/buxtoncollection/detail.aspx?id=232) and the [AT-550](http://research.microsoft.com/en-us/um/people/bibuxton/buxtoncollection/detail.aspx?id=227) had no physical keypad; rather, their calculators were operated using a capacitive touch screen that covered the entire watch crystal. But there was a significant difference between the two.

Despite having a touch screen rather than a mechanical keypad, the [TC-600](http://research.microsoft.com/en-us/um/people/bibuxton/buxtoncollection/detail.aspx?id=232) was nevertheless operated – like the C-801 – by pushing buttons on a keypad; however, in its case, the keypad was virtual. It appeared as a picture on the face of the watch, and the buttons were “pushed” by touching the watch crystal directly above where the number or operator appeared.

On the other hand, the [AT-550](http://research.microsoft.com/en-us/um/people/bibuxton/buxtoncollection/detail.aspx?id=227) had neither a mechanical or virtual keypad. Instead, the watch crystal (the glass face) was a capacitive touch screen. Using this, one could enter the digits and operators for the desired calculation by simply “writing” each on the touch screen using a finger. The watch software then recognized what character had been written/drawn, and then entered it into the calculator just as if it had been entered with a keypad..

What makes the contrast amongst these three watches especially interesting is that, arguably, the two keypad watches have more in common than the two touch-screen watches. After all, if you know how to use the C-801, you know how to use the [TC-600](http://research.microsoft.com/en-us/um/people/bibuxton/buxtoncollection/detail.aspx?id=232), and *vice versa*. Yet, knowing either, or both, of them will be of no help in figuring out how to use the [AT-550](http://research.microsoft.com/en-us/um/people/bibuxton/buxtoncollection/detail.aspx?id=227).

The lesson here is that the physical technology used in the user interface, touch-screen *vs* mechanical keypad, pales in comparison in terms of usage, when compared to the underlying conceptual model (calculator keypad *vs* character recognition). In this day and age, this example cautions us as to the risk of referring to something as, “a touch-screen interface.” Other than telling me one of the technologies used, this tells far less than most people think – as this example proves.

Device Details

Company: Casio | Year: 1980 | Original Price (USD): $69.95

Degrees of Freedom: NA

Dimensions (L x W x H): XXX x XXX x XXX (mm) Note: watch is W x D (Width is the shortest distance across the dial side of the main plate measured through the center.)

Key Words

Primary: Watch

Secondary: Calculator

Links

* [Casio Module No. 133](https://microsoft-my.sharepoint.com/personal/bibuxton_microsoft_com/Documents/Buxton%20Collection/Collection/Shot/Casio_C-801/CasioC801_Module_133_Manual.pdf)
* powerpoint
* Vimeo video link
* you tube link

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| --- | --- | --- |
| **Image** | **File Name** | **Caption** |
|  | CasioC801\_1\_Front.JPG | Front view of Casio C-80-1 calculator watch. |
|  | CasioC801\_2\_RtFrnt | Right front view of Casio C-80-1 calculator watch. |
|  | CasioC801\_3\_LftFrnt.JPG | Left front view of Casio C-80-1 calculator watch. |
|  | CasioC801\_4\_Back.JPG | Back view of Casio C-80-1 calculator watch. |
|  | CasioC801\_1980\_Catalogue\_Page\_06.jpg | Page from Casio’s 1980 Catalogue showing the three models of the C-80 calculator watch |
|  | CasioC801\_Ad1060.jpg | Advertisement from Sharper Image announcing the forthcoming release of the Casio C-80 watch. Notice that the price announced in the ad is $75.00. Compare this to the lower acctual final prices when released listed in the 1980 Casio Catalogue, which were even lower. |
|  | CasioC801\_Module\_133\_Manual.jpg |  |