**Little Ben(C) Version 2.0**
Chez l'horloger(C)
A BILINGUAL CLOCK
For The Apple II
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Written in Apple33 Manx Aztec C65 Version 3.2b
Windows XP Cross-development environment for DOS33

Available for Download at: http://www.clipshop.ca/Aztec/Ben33.zip
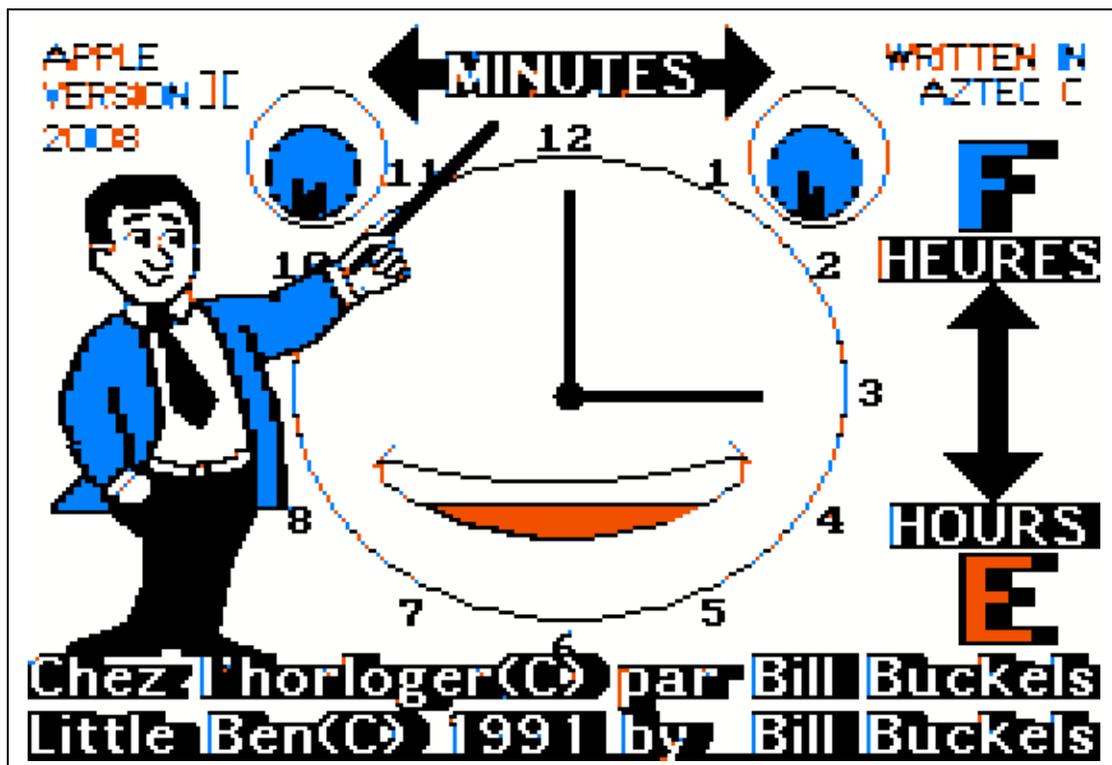
Program Description

Little Ben is a bilingual clock program for children from 6-12. It is intended to be used as a teaching aid for children learning to tell time. Little Ben consists of a single screen display of a clean and simple old-fashioned clock with hands and a face. This is an activity (a Time Display Program), and NOT a competitive game.

Time is displayed in Digital, Graphical, and Written Formats (in English or French). Time is advanced or retreated minute by minute and hour by hour with the keyboard.

The 3 activities supported by Little Ben (in English and French) are:

Hourly Review
Minute Review - 5 Minute Interval Blocks
Round The Clock Review - 1 Minute Intervals

This version of Little Ben is free and you are encouraged to give Little Ben for the Apple II away to anyone you please. The more kids that enjoy Little Ben, the merrier! See the licence Agreement below for more details.

I am distributing Little Ben with complete source code for this release. Read the licencing section if you are inclined to use source code. All of this will all be included in the next Aztec-C Website update which may already be done by the time you read this. Until then you will not be able to build Little Ben because the libraries have changed with additional routines that Little Ben uses.

History

I originally wrote Little Ben on the IBM-PC and the Apple II versions came after their respective IBM-PC Versions. There is no real difference between this version of Little Ben and the IBM-PC Version 2.0 released in 1999 which was also FreeWare.

I formatted Little Ben for the Apple II's 280 x 192 graphics mode which is close enough to the IBM-PC's CGA Graphics that no extreme layout changes were necessary between computers. Hoping to run on the oldest Apple II's possible as well as the newer ones, I chose DOS 3.3 for this version. Apple II Version 1.0 was written for ProDOS and was never publicly released and vanished from the planet, lost in the sands of time. This version was mostly written from the ground-up since very little source code could be used between the IBM-PC and the Apple II.

Program Details

Getting Started
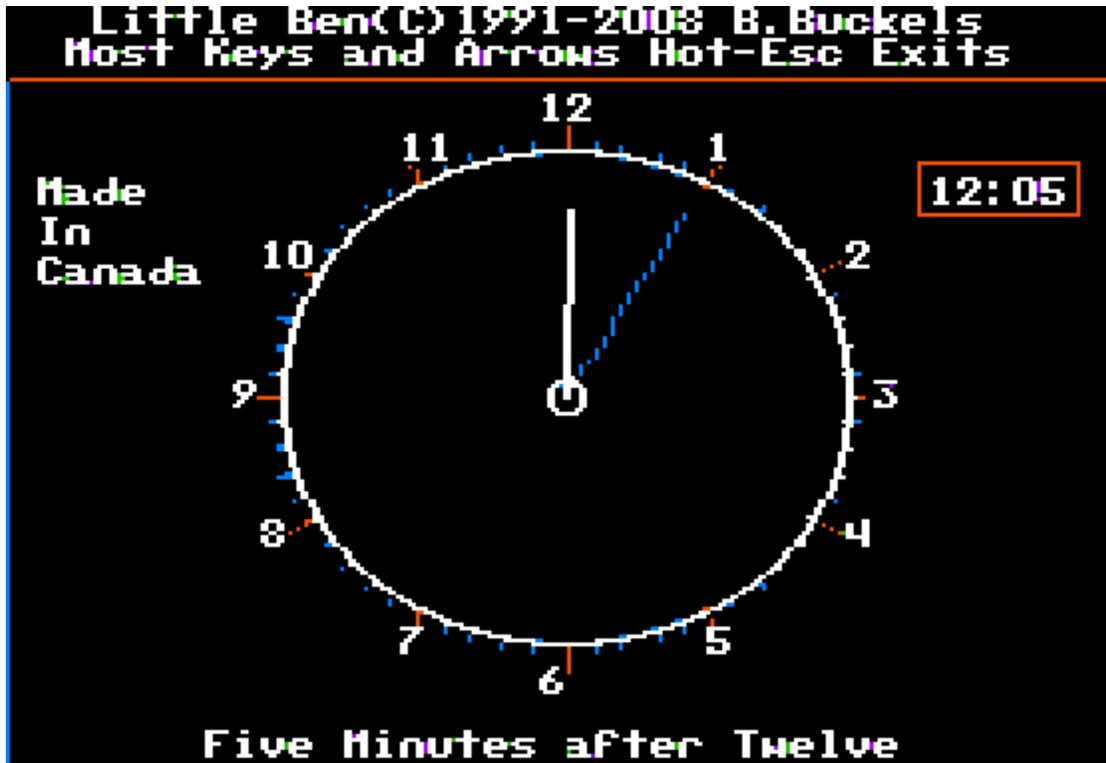
The child must be reading at about a Grade 2 (Age 7-8) level to use this program. An explanation of the parts of the clock including "the little hand" and "the big hand" must be done in advance of using "Little Ben".

Time Display - Digital, English, French, and Graphical

The Time that is displayed on the clock is given in English or French at the bottom of the screen (i.e. "Twenty-nine Minutes after Three", etc.) and in a the now-familiar digital format (i.e. "3:29") at the top of the screen. The clock is controlled by the user. As the time is advanced or retreated, the hands of the clock move. The positions for the minutes and the hours are clearly marked and the hours are each properly identified.

Since the display is updated every time change, the result of the clock hands can be visually verified in usually-familiar digital terms, and in usually not-so-familiar traditional terms (of clock face and hands, and of written time in English or French).

Commands and Navigation

E and F - English and French Toggle

The Display is switched back and forth between English and French by pressing the "E" key for English or the "F" key for French. This means that the time can be verified by immediately translating to and fro.

Arrow Keys

Up and Down Arrows - Hours

The Hours are advanced or retreated with the down-arrow and up-arrow keys.

Left and Right Arrows - 5 Minute Intervals (Time Blocks)

The minutes are advanced or retreated in 5 minute intervals with the left-arrow and right-arrow keys.

The Advantage of 5 Minute Intervals (Time Blocks)

Using 5 minute intervals (as opposed to 1 minute intervals) means that the clock can be visually cycled forwards or backwards by larger units in the hope of more easily building a logical association between minutes and hours.

When the minutes are being advanced with the arrows, they jump to the nearest 5 minute interval. Since most kids at this age (7-8) understand the principles of "counting by 5's" and primary multiplication, the quicker visual translation of minutes to hours using time blocks of 5 minutes may be easier to grasp visually.

All Other Keys - Round The Clock Review
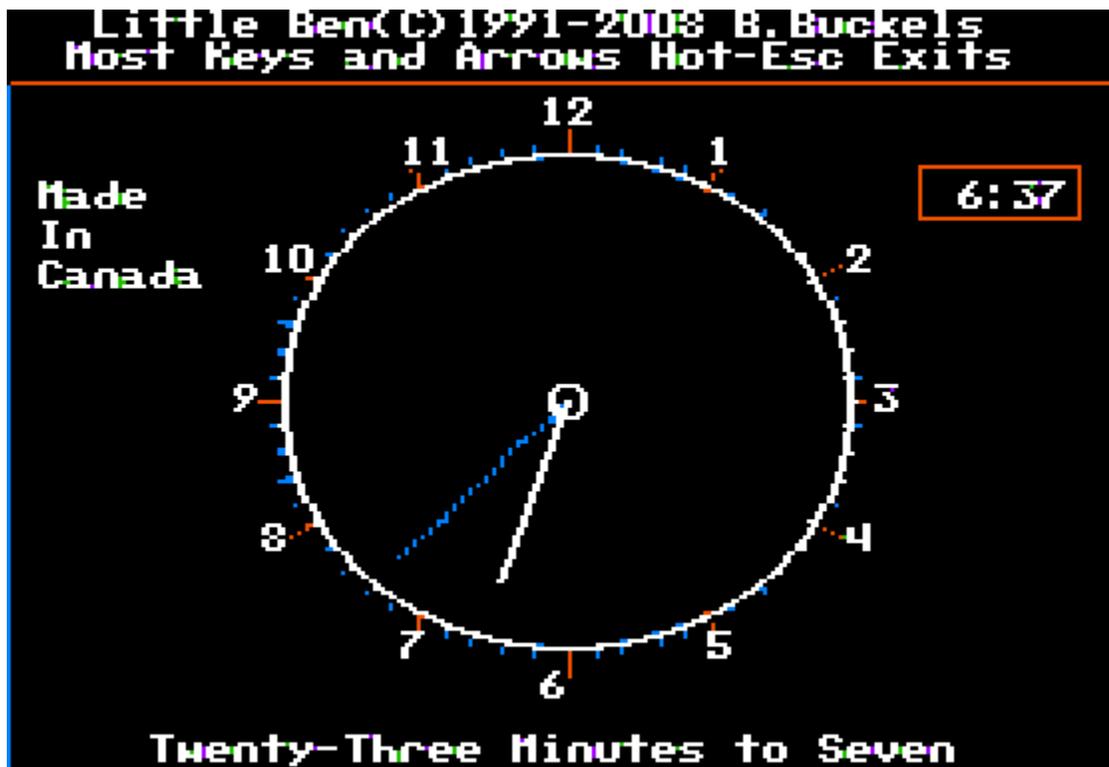
Aside from the Escape Key which exits, the other standard keyboard keys advance the clock minute by minute, and permit a "round-the-clock" review (1 minute intervals).

<p align="center">**Licence Agreement**</p>

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