# PERSONAL ELECTRONIC BOOK PROVIDING KEYPAD AND READABLE AND WRITABLE CD DRIVES

## BACKGROUND OF THE INVENTION

### Field of the Invention

The invention relates to an electronic book for the display and input of text and data. Specifically, the present invention provides a flat screen, which displays textual information, hinged to a keypad, which provides data entry. More specifically, the electronic device has two CD drives. The first of these drives is read only and reads CDs to display material from text books on the screen. The second drive is writable and provides data entry and storage. The electronic book is ideal for students who have a CD that contains every text book needed for a given course. These students may use the CD-ROM drive to access their textbook, and the keypad and writable CD drive to take notes in class and store them on a CD.

## SUMMARY OF THE INVENTION

The invention relates to an electronic device that is an improvement on an electronic book. The electronic book has a display screen and a fold-up alphanumeric keypad. Adjacent to the display screen are buttons for scrolling up and down the text displayed on the screen. At the top edge of the screen are two drives to house CDs in the book. The purpose of the first CD drive is to read the CD the user has placed in the electronic book. For student use, a CD will have a number of different textbooks that will be used during the course. Once the power is turned on and the screen becomes illuminated, a listing of the books will appear on the screen and the student will scroll to the book needed for review. The student will then activate that book and the text will appear. The student may scroll up or down or jump to particular pages by using the high speed forward or reverse beside the screen.

The second, writable CD drive is provided for data processing purposes. If there is a passage in the text needed for further study, it can be highlighted and transferred to the second CD, namely the writable CD, for storage. The keypad also allows the electronic book to act as a data processor in that the student may type notes to the writable CD. Instead of a full CD drive a 3¼" floppy drive may be used.

When the electronic book is closed the keypad folds up over the display screen and locks in place. When it is opened the keypad may be folded out like a laptop with the screen upright. The keypad may also be fully rotated until it reaches the back of the display screen. It is then held in place by a locking device. A protective flap is also used to cover the keys of the keypad while it is in this position. This protective flap is hinged to the side of the keypad. While the electronic book is in this position it may be held in the student's hands to be read. The keypad is also inoperable in this position.

The electronic book may be powered by a rechargeable battery located within the housing of the unit. The battery contains a converting cord that allows the electronic book to be plugged into an outlet for direct power or battery recharging. The electronic book also includes a power saving feature which allows it to sleep when on but not in use. Additionally, the electronic book may be provided with a television connection that allows the television to act as the screen of the electronic book. This connection allows the unit to conserve power.



## BRIEF DESCRIPTION OF THE DRAWINGS

Other objects and features of the present invention will become apparent from the following detailed description considered in connection with the accompanying drawings which disclose several embodiments of the present invention. It should be understood, however, that the drawings are designed for the purpose of illustration only and not as a definition of the limits of the invention.

FIG. **1** shows a perspective view of the electronic book in the open position;

FIG. **2** shows a perspective view of the electronic book in the closed position;

FIG. **3** shows a perspective view of the electronic book in the open position where the keypad has been rotated fully around to the back of the display screen; and

FIG. **4** shows a block diagram of the electronics used in the electronic book.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

FIG. **1** shows electronic book **1** in the open position. Electronic book **1** has a flat display screen **2** that displays the text to be read by the user. Flat display screen **2** is enclosed by a housing **4***a*. Electronically and mechanically connected below flat display screen **2** is keypad **3** that allows the user to type text into electronic book **1** for display on flat display screen **2**. Keypad **3** is also enclosed by a housing **4***b*. Electronic book **1** may be opened or closed due to a hinge device **5**. In a closed position, housing **4***b* surrounding keypad **3** lies flat on top of housing **4***a* surrounding flat display screen **2**.

For textual information to be displayed on flat display screen **2**, a CD must be loaded into CD-ROM drive **6** located behind flat display screen **2**. To load a CD, eject button **24** next to CD-ROM drive **6** is pressed and the CD is placed inside the CD-ROM drive and closed. The CD is removed in the same manner. To activate electronic book **1**, power button **8** is pressed. Pressing power button **8** activates the electronic processor within housing **4***a*, which controls and monitors the operation of electronic book **1**. To start CD-ROM drive **6**, CD button **9** located beside flat display screen **2** is pressed. Once pressed, a text book and chapter from the CD may be chosen by the user. A list of books is displayed on flat display screen **2** and the user selects a book by pressing the arrow keys disposed on keypad **3**, which allow the user to scroll through the books. A book is selected by pressing the enter key disposed on keypad **3**.

The text book and chapter chosen are displayed on second display screen **17** directly below flat display screen **2**. The chapters of the book may be changed on this screen by pressing down button **26** to advance the chapters and up button **25** to return to the previous chapter.

Data may also be fed into electronic book **1** through the use of a solid state memory device or a small computer system interface (SCSI). The SCSI would provide for at least a 10 megabyte/sec transfer rate.

While reading text, the user may scroll down to advance the text on the screen. To scroll down the user presses a first scroll button **12** disposed on the side of flat display screen **2**. If the user wishes to return to text that was passed, the user may press a second scroll button **13** that scrolls upward. The user may also advance or return through the material quicker than using scroll buttons **12** or **13**. The user may press forward button **15** disposed on the side of flat display screen **2** that allows the user to move through the material by