

screen or pressure sensitive LCD display, a cursor, function keys and an on/off switch that is activated when the pocketbook device is opened. A hinged binding contains a battery pack and rings to hold expansion cards. A back cover contains the electronics and a power source. Multiple methods of communicating between the expansion cards and the pocketbook include fiber optics, LED links and electromagnetic induction along the rings. The screen can be touch sensitive or the unit can be setup with a pressure sensitive screen for hand writing recognition. The expansion cards provide the capability of adding and removing a plurality of databases.

[0016] U.S. Pat. No. 5,339,091 to Yamazaki et al. discloses a portable electronic book comprised of a LCD display, keybutton inputs or other external input facilities, an on/off switch activated by opening the cover, a hinged cover, a solar cell in the cover to power the unit, a connector for an external power source and a disk drive to read information from optical or floppy disks. Other memory devices could include magnetic tape and EPROMS. The screen incorporates pressure or photo sensors so the user can select and emphasize portions of the text for later recall.

[0017] In view of the foregoing discussion, it will be readily appreciated by those skilled in the art that a need exists for a video display unit which, when combined with conventional written materials, can be used to create an integrated, hybrid document consisting of both the printed word and one or more demonstrative motion video sequences, animated scenes, a series of graphs and/or charts, and the like. Moreover, a need exists for a video display unit which can be used in a stand-alone or independent fashion to present such video sequences or "video documents" to another individual or group.

SUMMARY OF THE INVENTION

[0018] The aforementioned needs are addressed, and an advance is made in the art, by a video display system comprising a housing, a flat panel display, a memory storage module for storing data representative of an audio/video sequence, and a user input interface operable to cause the video sequence to initiate playback on the flat panel display.

[0019] In accordance with an illustrative embodiment of the present invention, in which the video display system is to be employed in a bound hybrid document such that the stored video sequence forms a part of the hybrid document, a plurality of apertures are defined either in the housing itself or in a binding attachment which is securable by, for example, adhesive means, to accommodate the integration of the video display system within the bound hybrid document. It is contemplated by the inventor herein that a wide variety of binding situations may be encountered by the user of the video display system in accordance with this embodiment of the invention. For this reason, the housing may be configured as two detachable sections, a first section housing the flat panel display and video storage module, and a second section defining one or more aperture patterns corresponding to a respective number of specific binding techniques. One form of the second section may, for example, be configured with three holes along the vertical and/or horizontal direction to facilitate insertion into a three-ring binder. Another form of the second section may be configured with velo binding openings along the vertical and/or

horizontal direction. Yet another form of the second section may be configured with openings to accommodate a spiral or coil binding system. It will thus be readily appreciated by those skilled in the art that a wide variety of binding situations may be addressed in a simple, cost effective manner.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] The various features and advantages of the invention will become apparent from a consideration of the detailed description which follows taken in conjunction with the drawings, in which:

[0021] FIG. 1 is a perspective view depicting a touch-screen implementation of the present invention, constituting a video document portion of an integrated hybrid document within a conventional three-ring binder;

[0022] FIGS. 2A-2C depict various alternative, detachable housing section configurations that are designed to accommodate different binding techniques and systems;

[0023] FIG. 3 is a block diagram depicting the interactions of the various internal components disposed within the housing of the illustrative embodiment of FIG. 1;

[0024] FIG. 4 depicts an alternate embodiment of the present invention which utilizes discrete individual push-button operators to advance, rewind, and initiate playback of the stored video document;

[0025] FIG. 5 depicts a video display document constructed in accordance with the present invention and affixed to an illustrative binding attachment to provide both a suitable binding surface for mounting in a holder and to allow the device to be more easily be manipulated just like a sheet of printed material in such a holder;

[0026] FIGS. 6A-6C are various views depicting an alternate binding attachment which may be used as an alternative to the illustrative attachment depicted in FIG. 5 to provide a suitable binding surface for mounting in a holder while allowing the device to be manipulated just like a sheet of printed material in such a holder; and

[0027] FIGS. 7A-7C depict various techniques for transferring video sequence data into video display devices of the type employed by the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0028] Initially, it should be emphasized and understood that the present invention is believed to have applicability as either a stand alone unit, by which video sequence documents or presentations may be made to one or more individuals, or in conjunction with printed materials as part of a bound, hybrid document. Accordingly, although in the discussion which follows, particular reference will be made to specific embodiments of the invention relating to the creation of hybrid documents, such reference is for illustrative purposes only and should not be deemed to limit the scope of the invention herein.

[0029] In any event, and with initial reference to FIG. 1, there is shown a hybrid integrated document 10 consisting of video display device 12, three-ring binder 14, and a plurality of individual sheets 16 of printed material, as for example,