

through, each of said plurality of apertures being located through said braille board reading surface portion at each of said dot pin locations for each of said one thousand braille cells, a plurality of dot pins, each one thereof being located within each of said plurality of apertures, said plurality of dot pins having a lowered state residing below said braille board reading surface portion and a raised state wherein a portion thereof resides a predetermined distance above said braille board reading surface portion, a plurality of actuators, each one thereof being connected to each one of said plurality of dot pins for selectively placing each one thereof into said raised and lowered states;

each of said plurality of actuators includes a solenoid having a solenoid winding located about a permanently magnetized actuating rod, one of said plurality of dot pins being located at a top end thereof, and a flanged stop being located at a bottom end thereof, each of said solenoids of each of said plurality of actuators being soldered to a top portion of a first circuit board such that a first lead of each of said solenoid windings have a connection to a first set of solder connections of said first circuit board and a second lead of each of said solenoid windings have a connection to a second set of solder connections of said first circuit board, said first circuit board further having a plurality of holes there-through for allowing a bottom portion of each of said permanently magnetized actuating rods to pass through one of said plurality of holes such that each of said flanged stops connected to the bottom ends of each of said permanently magnetized actuating rods about a portion of a bottom portion of said first circuit board located about each of said holes when the dot pin connected to the top end of each of said permanently magnetized actuating rods is in said raised state, each of said dot pins abutting a top portion of one of said solenoid windings when located in said lowered state;

each of said first solder connections having a first prong lead in electrical communication therewith, each of said first prong leads extending down from said first circuit board a first predetermined distance to form an electrical communication between said first circuit board and a second circuit board, each of said second solder connections having a second prong lead in electrical communication therewith, each of said second prong leads extending down a second predetermined distance through said second circuit board to form an electrical communication between said first circuit board and a third circuit board.

2. A braille board display according to claim 1, further comprising:

- a plurality of solid state switching chips, each one containing a plurality of solid state switches for selectively providing power to a portion of said solenoids;
- a buffer storage means for receiving alphanumeric information from an outside source;
- a controller for receiving said outside alphanumeric information from said outside source so as to control said plurality of solid state switching chips in such a manner as to translate at least a portion of said alphanumeric characters into a page of braille text having up to twenty five lines.

3. A braille board display as claimed in claim 1, including means for allowing a user of said display device to vary the amount of current passing through each of said solenoid windings of each solenoid.

4. A braille board display device comprising:

- data input means for accessing alpha-numeric information from an outside source;
- data conversion means for translating said alpha-numeric information into at least one page of braille text, each of said at least one page of braille text containing one-thousand braille cell locations configured into forty columns of cells across and twenty-five lines of cells down, each of said cells having a plurality of dot pin locations to represent one alpha-numeric character, said data conversion means utilizing the maximum number of cells per line in accordance with the last word which will fit on that line; and means for displaying said at least one page of braille text;

said means for displaying including a braille board reading surface portion having a plurality of apertures therethrough, each of said plurality of apertures being located through said braille board reading surface portion at each of said dot pin locations for each of said one thousand braille cells, a plurality of dot pins, each one thereof being located within each of said plurality of apertures, said plurality of dot pins having a lowered state residing below said braille board reading surface portion and a raised state wherein a portion thereof resides a predetermined distance above said braille board reading surface portion, a plurality of actuators, each one thereof being connected to each one of said plurality of dot pins for selectively placing each one thereof into said raised and lowered states;

each of said plurality of actuators includes an electromagnetic transducer having an electromagnet connected to a cordwood circuit board, each of said dot pins being made of permanent magnetizable material and being located directly above each of said electromagnets, each of said dot pins containing a bottom flanged portion such that each of said bottom flanged portions about a bottom portion around each of said plurality of apertures of said braille board reading surface portion when each of said dot pins are in a raised state, said bottom flanged portions of each of said dot pins abutting a top portion of each of said electromagnets when in a lowered state;

said each of said electromagnets being rigidly secured to a first circuit board of said cordwood circuit board, said electromagnets including first prong leads extending to a second circuit board of said cordwood circuit board being located directly below said first circuit board, said electromagnets including second prong leads extending to a third circuit board of said cordwood circuit board being located directly below said second circuit board, said cordwood circuit board including electrical insulation layers between said first and second circuit boards and between said second and third circuit boards.

5. A braille board display according to claim 4, further comprising:

- a plurality of solid state switching chips, each one containing a plurality of solid state switches for selectively providing power to a portion of said electromagnetic transducers;
- a buffer storage means for receiving alphanumeric information from an outside source;
- a controller for receiving said outside alphanumeric information from said outside source so as to control said plurality of solid state switching chips in such a manner as to translate at least a portion of said alphanumeric